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Materials; Postsecondary Education; Sludge; Technology; Waste Disposal; \*Waste Water; Water; Water Pollution; \*Water Quality; \*Water Resources;

\*Water Treatment

#### **ABSTRACT**

Compiled are abstracts and indexes to selected print and non-print materials related to wastewater treatment and water quality education and instruction, as well as materials related to hazardous wastes and public participation. Sources of abstracted/indexed materials include all levels of government, private concerns, and educational institutions. Title, author(s), publication date, cross references, descriptors, and availability are provided for each entry. Procedures are outlined by which instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements of their programs. Also included are an author and subject index. This publication supplements and does not replace "Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources" or IRIS Supplements 1-24. (ML)

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## Prepared by

Environmental Quality Instructional Resources Center
SMEAC Information Reference Center
The Ohio State University
1200 Chambers Road, Room 310
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U S DEPARTMENT OF EDUCATION
Office of Educational Research and improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

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WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts to Water Quality and Water Resources Materials

Supplement 25. 1986

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) "

March, 1986

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#### Preface

This publication contains abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs.

Supplements to this publication will be issued periodically. For further information about these materials contact:

Environmental Quality Instructional Resources Center 1200 Chambers Road, Room 310 Columbus, Ohio 43212

(614) 422-6717



- I. General Information about Materials in IRIS.
  - A. What types of materials are included in IRIS?

The Environmental Quality Instructional Resources Center acquires, reviews, indexes, and announces both print (books, modules, units, etc.) and non-print (films, slides, video tapes, etc.) materials related to water quality and water resources education and instruction.

Materials selected must be available from some source for announcement. When materials are not readily available we attempt to make the materials available through some national information service for easier acquisition. In a few cases the Environmental Quality Instructional Resources Center is the source of the materials.

B. How are materials entered into IRIS?

We request that people assist us in locating materials for the system. If you have materials you believe to be useful to others, please send two copies if possible to the:

Environmental Quality (EQ) Instructional Resources Center 1200 Chambers Road, Room 310 Columbus, Ohio 43212

Materials are reviewed by the project staff. Availability of the materials is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material. The index terms (descriptors) are concepts or terms used to describe the contents and the form of the document. (See the Subject Index for a listing of those that have been used.) The index terms are useful for locating materials manually, such as with this supplement, and also by computer.

When items are processed they are entered on the IRIS (water) computer tape. This tape is maintained by the EQ Instructional Resources Center at The Ohio State University and is used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

- C. How can a user locate materials in IRIS?
  - 1. All materials placed in IRIS (water) collection.

Materials entered into the IRIS (water) collection can be located in two ways: (1) by manual search of the 1983 Compilation and supplements that follow and (2) by computer.



The compilation produced in 1983 includes the original IRIS (1979) and Supplements 1-15. It is available for \$75.00.

Quarterly updates of the compilation are available by subscription on a yearly basis. Information regarding an annual subscription to IRIS (water) Quarterly Compilations can be obtained by writing to the EQ Instructional Resources Center. A subscription to the quarterly supplements for 1985 is \$12.00 (within the U.S.). Price to Canada and Mexico is \$14.00. Prices in other Countries is \$18.00. Separate quarterly supplements are \$5.00 each.

The compilation and the quarterly supplements can be scanned and the subject index can be used for manual searches.

Computer tapes of the IRIS (water) collection can also be searched. The IRIS tapes are available for searching at The Ohio State University and will again be available for computer searching at other sites in the future.

2. Materials placed in the Educational Resources Information System (ERIC)

A number of the materials processed for the IRIS (water) system are entered into the ERIC system and announced in Resources in Education (RIE). Resources in Education (RIE) is published monthly and is available from:

Superintendent of Documents U.S. Government Printing Office Washington, DC 20402 (202) 783-3238

The current price is listed in the most recent issue of RIE. Lack if a college or university library close to you has a copy. If they do not, contact the EQ Instructional Resources Center for assistance.

Many libraries subscribe to RIE. Materials announced in RIE can be searched manually each month by scanning RIE or by checking the index terms in the back of each issue. Materials announced in RIE can be searched by computer also. ERIC computer tapes may be purchased outright, but users can access them through Dialog, BRS, CompuServe and Systems Development Corporation (Orbit). For the address of search services in your state that can search these databases, contact the:

EQ Instructional Resources Center 1200 Chambers Road, Room 310 Columbus, Ohio 43212 (614) 422-6717



Most of the materials announced in  $\overline{\text{RIE}}$  are available on microfiche (microfilm) at over 700 sites throughout the United States and the world. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost. Microfiche copies (or in most cases Xerox copies) can be ordered through the ERIC Document Reproduction Service. The address and order information is in the back of each issue of  $\overline{\text{RIE}}$ . Xerox copies of many items related to water quality and resource education and training can also be ordered through the EQ Instructional Resources Center for \$0.06 per page plus \$1.00 per document.

For information about locations of ERIC microfiche sites in your state, contact the EQ Instructional Resources Center.

A number of journal articles processed for the IRIS (water) system are entered into the ERIC system and announced in Current Index to Journals in Education (CIJE).

Current Index to Journals in Education is published monthly and is available from:

ORYX Press 2214 North Central at Encanto Phoenix, Arizona 85004 (602) 254-6156

Many libraries subscribe to CIJE. Materials announced in CIJE can be searched manually each month by scanning CIJE or by checking the index terms in the back of each issue. Materials announced in CIJE can be searched by computer also. Refer to the previous discussion of RIE concerning computer searches.

Materials announced in <u>CIJE</u> can be located in journals at many university libraries.

Many of the articles can be obtained from University Microfilms. For prices and further information write to:

UMI Article Reprint Department 300 North Zeeb Road Ann Arbor, Michigan 48106 (800) 521-0600



## II. How to Use the Compilation

A. Description of Information in Resumes

Each resume is listed by EW number in numerical order in the resume section. Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is a sample resume of an item not entered into ERIC. Sample resume #2 is a sample resume of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

- 1. Sample resume of materials not entered in ERIC
  - a. IRIS NUMBER: EW006023
  - b. PUBLICATION DATE: FEB 81
  - c. TITLE: PROGRAMMED APPROACH TO WATER/MASS ANALYSES.
  - d. PERSONAL AUTHOR: SPENCE, GEORGE R., JR.
  - e. DESCRIPTOR: \*DESIGN; \*ENGINEERING; \*EQUIPMENT; \*MASS BALANCE; \*PROJECT DESIGN; \*POLLUTION ENGINEERING; \*PIPES; \*WATER RESOURCES
  - f. DESCRIPTIVE NOTE: 30-33P.
  - g. ABSTRACT: DURING THE ENGINEERING PHASE OF A PROJECT DESIGN, WATER REQUIREMENTS OFTEN CHANGE AS NEW INFORMATION BECOMES AVAILABLE. THIS ARTICLE DETAILS A PROGRAMMED APPROACH TO CALCULATION OF A WATER/MASS BALANCE WHICH PROVIDES THE USER WITH THE ABILITY TO READILY ASSESS THE IMPACT OF VARYING WATER QUALITIES, FLOW PATTERNS, AND FLOW RATES. THIS INFORMATION IS THEN USED IN DETERMINING PIPE AND EQUIPMENT SIZES.
  - h. AVAILABILITY: POLLUTION ENGINEERING; V13 N2
  - a. IRIS NUMBER -- this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason.
  - b. PUBLICATION DATE -- date material was published according to information on the material.
  - c. TITLE
  - d. PERSONAL AUTHOR -- person or persons who wr e, compiled, or edited the material. Up to two personal authors can be listed.
  - e. DESCRIPTOR -- subject terms which characterize substantive contents and form of the materials. The major terms are preceded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.



- f. DESCRIPTIVE NOTE -- various items of information may be contained in this section. For print materials the number of pages is usually listed. The price of the material quoted is the last time information was received from the source. Please note: Prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.
- g. ABSTRACT -- some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.
- h. AVAILABILITY -- information in this field indicates where the material can be obtained.
- 2. Sample resume of material entered into ERIC (Resources in Education).

Items entered into ERIC (Resources in Education) will have a few additional data fields. See letter references "a" and "b" below.

IRIS ACCESSION NUMBER: EWOO6664
PUBLICATION DATE: 80

TITLE: RESOURCE DEVELOPMENT OF WATERSHED LANDS: A SIX WEEK SHORT COURSE.

DESCRIPTOR: ADMINISTRATION; ECOLOGICAL FACTORS;
ECONOMIC FACTORS; INSTRUCTIONAL MATERIALS; \*LAND USE;
NATURAL RESOURCES; \*POST SECONDARY EDUCATION; \*TECHNICAL EDUCATION; \*WATER RESOURCES; HYDROLOGY; NATURAL RESOURCES MANAGEMENT; WATER QUALITY; \*WATERSHEDS

b. DESCRIPTIVE NOTE: EDRS PRICE: MF01 PLUS POSTAGE-NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT.

ABSTRACT: THIS COURSE WAS DESIGNED TO PROVIDE THE WATER RESOURCE TECHNICIAN OR MANAGER WITH INFORMATION WHICH WILL AID IN THE IMPLEMENTATION OF IMPROVEMENTS OF PRESENT LAND USE PRACTICES AND TO ILLUSTRATE ALTERNATIVE CONCEPTS AND TECHNIQUES IN LAND AND WATER USE FOR INCREASING AND IMPROVING THE MULTIPLE PRODUCTS OF WATERSHED LANDS. (ED 197 941)

- a. AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, 3900 Wheeler Avenue, Alexandria, VA 22304
- a. ERIC NUMBER -- the ED number indicates the document has been processed and entered into Resources in Education. This identification number is the number to use when ordering a document or when requesting information about a document.



DRS PRICE -- if material is available through the ERIC coument Reproduction Service, the price of the material when it was entered into the ERIC system and the form of the material is indicated. "MF" means microfiche; "HC" means Xerox copy. Prices are subject to change. Current prices of microfiche and paper copies are listed in the back of each issue of Resources in Education; consult the latest monthly issue for current prices. Information about ordering items can be obtained by contacting:

ERIC Document Reproduction Service (EDRS)
3900 Wheeler Avenue
Alexandria, VA 22304
(703) 823-0550

Items that are available on microfiche (MF) are contained in microfiche collections at over 700 sites where they can be read. For information on the microfiche locations in your state contact the EQ Instructional Resources Center.

#### B. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index or Author Index.

## Subject Index

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to Laboratory Techniques and to Wastewater Treatment. Similar techniques could be used to identify other information desired.



Users with ERIC microfiche should check the resume entry. If the document is available on microfiche from the ERIC Document Reproduction Service, the availability will be indicated by "MF" on the resume by "EDRS Price." This means libraries with ERIC microfiche collections should have the document on microfiche.

If you want a document available through the ERIC Document Reproduction Service (EDRS) see the section on ordering documents.

### 2. Author Index

If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author; hence, they are not listed in this index.

## III. Correcting an Existing IRIS Record

The IRIS data base will be updated on a quarterly basis. Corrections will be made to the data base at those times. You can help improve IRIS by sending corrections for items you find to be in error.

We request that you duplicate (copy) the resume from the compilation, mark the information you believe to be wrong (or incomplete), and send the marked resume to:

EQ Instructional Resources Center 1200 Chambers Road, Room 310 Columbus, Ohio 43212 514) 422-6717

Corrections of errors will occur in the IRIS tapes at the next update after comments are received.

If you have difficulty obtaining materials from the listed source in the AVAILABILITY section of the resume, please let us know. We will contact the sources to verify whether the materials are available, but your assistance will provide corrections between annual availability checks.

If you are the <u>supplier</u> of materials in IRIS, please let us know if you remove a product from your list, modify a product on your list, or change the price of the product.



IV. Requests to Receive Information about IRIS and the IRC Bulletin

Information regarding IRIS, materials in IRIS, and modifications in the system will be announced in the IRC Bulletin. The Bulletin is issued about four times a year as information is available.

If you are not on the mailing list write to the EQ Instructional Resources Center for subscription information.

If you need information about IRIS you can also phone (614) 422-6717 with your questions.

V. Requests for Assistance in Using IRIS

If you need help in using the IRIS manuals, phone (614) 422-6717 or write to the EQ Instructional Resources Center. Staff are normally available from about 8:30 a.m. to 4:30 p.m. Eastern time to answer your questions.

VI. How to Locate Other Relevant Educational Materials

A number of people have requested information related to such areas as management, basic skills (reading, mathematics, writing) human relations, contract negotiations, and other topics. The EQ Instructional Resources Center has developed or obtained some materials in these areas.

Another excellent source of information for many educational concerns is the ERIC System.

ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs.

There are 16 Clearinghouses in the nationwide ERIC network. Each specializes in a different, multi-discipline, educational area. Each searches out pertinent documents.

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.



The 16 ERIC Clearinghouses are listed on the next few pages, together with addresses, telephone numbers, and brief scope notes describing the areas they cover. You can contact them for assistance in locating information relevant to their scope notes.

A. <u>ERIC Clearinghouse on Adult, Career, and Vocational Education</u>
The Ohio State University
National Center for Research in Vocational Education
1960 Kenny Road
Columbus, Ohio 43210
Telephone: (614) 486-3655

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical ducation, including new sub-professional fields, industrial arts, and vocational rehabilitation for the handicapped.

B. ERIC Clearinghouse on Counseling and Personnel Services
University of Michigan
School of Education, Room 2108
Ann Arbor, Michigan 48109
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings, theoretical development of counseling and guidance, use and results of person procedures such as testing, interviewing, disseminating, and analyzing such information, group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

C. ERIC Clearinghouse on Elementary and Early Childhood Education
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research and practice related to the development of young children.



## D. ERIC Clearinghouse on Educational Management

University of Oregon Library, Room 108 1787 Agate Street Eugene, Oregon 97403 Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks and processes of administration, methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, incuring, utilizing, and evaluating educational facilities.

# E. ERIC Clearinghouse on Handicapped and Gifted Children Council for Exceptional Children 1920 Association Drive Reston, Virginia 22091

Reston, Virginia 22091 Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of proferzional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

## F. ERIC Clearinghouse on Higher Education George Washington University One Dupont Circle, NW, Suite 630 Washington, DC 20036 Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs; curricular and instructional problems and programs, faculty, institutional research; federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learing, planning, governance, finance, evaluation, interime cutional arrangements, and management of higher educational institutions.



G. ERIC Clearinghouse on Information Resources
Syracuse University
School of Education
Huntington Hall, Room 030

150 Marshall Street Syracuse, New York 13210

Telephone: (315) 423-3640

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and cable television, communication satellites, microforms, and public television.

H. ERIC Clearinghouse for Junior Colleges
University of California at Los Angeles (UCLA)
Mathematical Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

I. ERIC Clearinghouse on Languages and Linguistics
Center for Applied Linguistics
1118 "22nd" Street, NW
Washington, DC 20037
Telephone: (202) 429-9551

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycholinguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly taught languages including English and speakers of other languages.



J. ERIC Clearinghouse on Reading and Communication Skills

National Council of Teacher of English 1111 Keryon Road

Urbana, Illinois 61801 Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication—forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

K. ERIC Clearinghouse on Rural Education and Small Schools

New Mexico State University Box 3AP Las Cruces, New Mexico 88000 Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

L. ERIC Clearinghouse for Science, Mathematics and Environmental Education

The Ohio State University 1200 Chambers Road - Room 310 Columbus, Ohio 43212 Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of incerest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.



M. ERIC Clearinghouse for Social Studies/Social Science Education Indiana University
Social Studies Development Center

2805 East 10th St.
Bloomington, IN 47405

Telephone: (812) 335-3838

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

N. ERIC Clearinghouse on Teacher Education

American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, NW, Suite 610

Washington, DC 20036

Telephone: (202) 293-2450

School personnel at all levels, all issues from selection through preservice and inservice preparation and training to retirement; curricula, educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject speciality ir other ERIC Clearinghouses; all aspects of physical education.

O. ERIC Clearinghouse on Tests, Measurement, and Evaluation Educational Testing Service (ETS)
Rosedale Road
Princeton, New Jersey 08541
Yelephone: (609) 734-5176

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects of programs.

P. ERIC Clearinghouse on Urban Education
Teachers College, Columbia University
Institute for Urban and Minority Education
Box 40
525 West 120th Street
New York, New York 10027
Telephone: (212) 678-3433

The relationship between urban life and schooling; the effect of urban experiences and environments from birth onward; the academic, intellectual, and social performance of urban children and youth from grade three through college entrance (including the effect of self concept, motivation, and other affective influences), education of urban, Puerto Rican and Asian American



populations, and rural and urban black populations; programs and practices which provide learning experiences designed to meet the special needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics, structural changes in the classroom, school, school system, and community and innovative instructional practices which directly affect urban children and youth; programs, practices, and materials related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, practices, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

Q. Educational Resources Information Center
Office of Educational Research and Improvement (OERI)
555 New Jersey, Ave. NW
Room 522
Washington, DC 20208
Telephone: (202) 626-9240

There are other sources of educational information in many states. Included are information dissemination units in the state departments of education, intermediate education units, and local education units. In many cases, a local school administrator or school librarian can help you locate assistance.

#### VII. How to Order Materials

The AVAILABILITY field in the resume indicates where materials can be obtained. A few of the sources are explained.

- A. A number of audiovisual materials can be obtained on a rental basis or purchased from the EQ Instructional Resources Center. Most items previously available from the NTOTC office are available from the EQ Instructional Resources Center at The Ohio State University. For further information write or call.
- B. Some of the materials are available through the ERIC Document Reproduction Service. MF (microfiche) are 4" x 6" sheets of microfilm; up to 96 pages of text can be reproduced on one sheet. HC (paper copy) is a reproduction of the document in paper form at the original size.

Order forms for these materials can be obtained from:

ERIC Document Reproduction Service 3900 Wheeler Avenue Alexandria, VA 22304 (703) 823-0550



c. The EQ Instructional resources Center will provide Xerox copies of materials that are not copyrighted for \$1.00 per document plus \$0.06 per page.

If you can not obtain materials that are listed or have difficulty obtaining materials, please contact the EQ Instructional Resources Center. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.



RESUME SECTION



IRIS ACCESSION NUMBER: EWØ10013

PUBLICATION DATE: 80

TITLE: OCEANCGRAPHY SCIENCE FOR SURVIVAL.

\*FOOD: \*FILMS: DESCRIPTOR: \*AUD!OVISUAL AIDS: \*INSTRUCTIONAL MATERIALS; \*NATURAL RESOURCES; \*OCEANOGRAPHY: \*RESEARCH: \*WATER RESOURCES

DESCRIPTIVE NOTE: RENTAL PRICE: \$15.00. MP-39. 40 MIN. COLOR/16MM FILM.

ABSTRACT: THIS FILM EXPLORES THE IMPORTANCE OF THE OCEAN TO MODERN MAN. MANY GOVERNMENT AGENCIES ARE INVOLVED IN OCEAN RESEARCH AND THE FILM DEALS WITH THE TYPE OF RESEARCH BEING DONE. THE WATER IS STUDIED AS WELL AS THE ORGANISMS IN THE WATER, THEIR PHYSIOLOGY AND PATTERNS OF BEHAVIOR. FOOD FROM THE SEA IS AN IMPORTANT RESOURCE AS ARE THE MINERALS FOUND THERE. THE NATURAL RESOURCES OF THE SEA ARE BEING CAREFULLY RESEARCHED TO LEARN HOW BEST TO USE AND PROTECT THEM. THE RESULTS FROM THIS RESEARCH ARE THEN BEING USED TO SOLVE SOME OF THE OCEAN'S POLLUTION PROBLEMS. SOME OF THE INFORMATION OF THE OCEAN'S POLLUTION PROBLEMS. SOME OF THE INFORMATION IS DATED.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 31Ø. COLUMBUS. OH 43212

IRIS ACCESSION NUMBER: EWØ1ØØ14

PUBLICATION DATE: 81

SAMPLING FOR TITLE: TRIHALOMETHANES (PART 1 OF 4). TRIHALOMETHANES IN DRINKING WATER.

TECHNIQUES: \*D'INKING WATER; DESCRIPTOR: \*ANALYTICAL \*CARCINOGENS; \*LABORATORY PROCEDURES: \*DISINFECTION; \*AUDIOVISUAL AIDS: \*FILMS: \*INSTRUCTIONAL MATERIALS; \*POSTSECONDARY EDUCATION; \*SAMPLING; \*TRIHALOMETHANES; \*WATER TREATMENT

DESCRIPTIVE NOTE: RENTAL PRICE: 10.00 MINUTE \$15.00. COLOR/16MM FILM.

ABSTRACT: THIS IS PART ONE OF A FOUR-PART SERIES ON THE ANALYSIS OF DRINKING WATER FOR TRIHALOMETHANES. THIS FILM PRESENTS PROCEDURES FOR SAMPLING FOR THE ANALYSIS.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD. ROOM 31Ø, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ10015

PUBLICATION DATE: 81

TITLE: TRIHALOMETHANES (PART 2 OF 4). PREPARATION OF STANDARDS FOR THE ANALYSIS OF TRIHALOMETHANES IN DRINKING WATER.

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*ANALYTICAL TECHNIQUES; \*DRINKING WATER; \*FILMS; \*DISINFECTION; \*INSTRUCTIONAL MATERIALS; \*POSTSECONDARY EDUCATION; \*STANDARDS; \*TRIHALOMETHANES; \*WATER TREATMENT

DESCRIPTIVE NOTE: RENTAL PRICE: \$15.00. 14.00 MINUTE COLOR/16MM FILM.

ABSTRACT: THIS IS PART TWO OF A FOUR-PART SERIES ON THE ANALYSIS OF DRINKING WATER FOR TRIHALOMETHANES. THIS FILM PRESENTS INFORMATION ON THE PREPARATION OF STANDARDS FOR THE ANALYSIS.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 31Ø, CÓLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ1ØØ16

PUBLICATION DATE: 81

TITLE: TRIHALOMETHANES (PART 3 OF 4). THE LIQUID-LIQUID EXTRACTION METHOD FOR THE ANALYSIS OF TRIHALOMETHANES IN DRINKING WATER.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*DRINKING WATER; \*CARCINOGENS; \*LABORATORY PROCEDURES: \*DISINFECTION; \*AUDIOVISUAL AIDS; \*FILMS; \*INSTRUCTIONAL MATERIALS; \*POSTSECONDARY EDUCATION: \*TRIHALOMERHANES: \*WATER TREATMENT

\$15.00. 16.00 MINUTE DESCRIPTIVE NOTE: RENTAL PRICE: COLOR/16MM FILM.

ABSTRACT: THIS IS PART THREE OF A FOUR-PART SERIES ON THE ANALYSIS OF DRINKING WATER FOR TRIHALOMETHANES. THIS FILM PRESENTS A LIQUID-LIQUID EXTRACTION METHOD FOR ANALYSIS.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, TI OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 31Ø. COLUMBUS. OH 43212

IRIS ACCESSION NUMBER: EWØ1ØØ17

PUBLICATION DATE: 81

TITLE: TRIHAL("METHANES (PART 4 OF 4). THE PURGE AND TRAP METHOD FOR T. E ANALYSIS OF TRIHALOMETHANES IN DRINKING WATER.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*DRINKING WATER; \*LABORATORY PROCEDURES; \*DISINFECTION: \*AUDIOVISUAL AIDS; \*FILMS; \*INSTRUCTIONAL MATERIALS; \*POSTSECONDARY EDUCATION: \*TRIHALOMETHANES: \*WATER TREATMENT

DESCRIPTIVE NOTE: RENTAL PRICE: \$15.00. 18.3Ø MINUTE COLOR/16MM FILM.

ABSTRACT: THIS IS PART FOUR OF A FOUR-PART SERIES ON THE ANALYSIS OF DRINKING WATER FOR TRIHALOMETHANES. THIS FILM PRESENTS THE PURGE AND TRAP METHOD FOR THE ANALYSIS.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWF12835

PUBLICATION DATE: 85

TITLE: NONDOMESTIC WASTEWATER PRETREATMENT PROGRAMS.

PERSONAL AUTHOR: BLACKWELL, LARRY G.; LANGWORTHY, VIRGIL W.

DESCRIPTOR: \*COMPUTER APPLICATIONS; \*COMPUTER PROGRAMS; \*COMPUTER SOFTWARE; \*MANAGEMENT; \*MONITORING; \*OPERATIONS(WASTEWATER); \*PLANNING; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 14, 43P.

ABSTRACT: DESCRIBED ARE WAYS THAT WASTEWATER SYSTEMS WITH A LARGE NUMBER OF NONDOMESTIC CONTRIBUTERS CAN MAKE USE OF A MICROCOMPUTER AND SUITABLE SOFTWARE.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT; V132 N11

IRIS ACCESSION NUMBER: EWØ12836

PUBLICATION DATE: 85

TITLE: AUDITING A WATER DISTRIBUTION SYSTEM POINTS TO IMPROVEMENTS.

PERSONAL AUTHOR: CORI, KENT A.

DESCRIPTOR: \*AUDITS; \*LEAKAGE; \*OPERATIONS (WATER); \*MANAGEMENT; \*METERS; \*RECORDKEEPING; \*WATER SUPPLY; \*WATER DISTRIBUTION; \*WATER AUDITS

DESCRIPTIVE NOTE: 25-27. 38P.

ABSTRACT: A COMPREHENSIVE EVALUATION CAN HELP A WATER UTILITY MANAGER REDUCE REVENUE LOSS, IMPROVE EFFICIENCY AND JUSTIFY EXPENDITURES.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT; V132 N11

IRIS ACCESSION NUMBER: EWØ12837

PUBLICATION DATE: 85

TITLE: TRY TACKLING A CORROSION INVESTIGATION.

PERSONAL AUTHOR: HEUMANN, DAVID W.

DESCRIPTOR: \*CORROSION; \*CALIFORNIA; \*PIPES; \*WATER DISTRIBUTION; \*WATER SUPPLY; \*WATER TREATMENT: \*WATER PIPES

DESCRIPTIVE NOTE: 32-34P.

ABSTRACT: KEEPING TRACK OF INTERNAL CORROSION IN A WATER DISTRIBUTION SYSTEM IS NOT AS DIFFICULT AS MANY UTILITY MANAGERS MIGHT THINK. A PROGRAM USED BY THE LOS ANGELES DEPARTMENT OF WATER AND POWER TO ASSESS THE LEVEL OF CORROSION IS DESCRIBED.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT; V132 N11

IRIS ACCESSION NUMBER: EWØ12838

PUBLICATION DATE: 85

TITLE: STABILIZING WATER WITH CHEMICAL DOSES.

PERSONAL AUTHOR: WALSKI, THOMAS M.; AND OTHERS

DESCRIPTOR: \*CORROSION: \*PH; \*PIPES; \*PLUMBING: \*WATER PIPES: \*WATER DISTRIBUTION; \*WATER SUPPLY; \*WATER STABILITY; \*NOMOGRAMS

DESCRIPTIVE NOTE: 36-37P.

ABSTRACT: WATER AT THE CORRECT PH WILL PROTECT THE DISTRIBUTION SYSTEM AND CUSTOMER PLUMBING AS WELL AS BEING CLEAN AND SAFE. THE OFTIMUM CHEMICAL DOSE CAN BE FOUND WITH THE HELP OF NOMOGRAMS AND A MICROCOMPUTER PROGRAM.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT: V132 N11

IRIS ACCESSION NUMBER: EWØ12839

PUBLICATION DATE: 85

TITLE: MOTOR CONTROL ELIMINATES ERRATIC DISTRIBUTION PRESSURE.

PERSONAL AUTHOR: WATTS, GENE

DESCRIPTOR: \*DISTRIBUTION PRESSURE; \*MOTOR CONTROLS; \*MOTORS: \*PUMPS: \*WATER PRESSURE

DESCRIPTIVE NOTE: 38, 40P.

ABSTRACT: A VARIABLE-FREQUENCY SPEED CONTROL, INSTALLED ON A DISTRIBUTION PUMP, ERADICATED PRESSURE FLUCTUATIONS-AND CUSTOMER COMPLAINTS.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT: V132 N11

IRIS ACCESSION NUMBER: EWØ12849

TITLE: DRINKING WATER AND HEALTH, VOLUME 5.

PERSONAL AUTHOR: OLECKNO, WILLIAM A.

DESCRIPTOR: \*CHEMICALS; \*DRINKING WATER; \*HEALTH EFFECTS; \*ARSENIC; \*ASBESTOS; \*SAFE DRINKING WATER ACT; \*TOXICITY; \*WATER QUALITY

DESCRIPTIVE NOTE: 176P. PRICE: \$15.95

ABSTRACT: THIS REPORT IS THE FIFTH IN A SERIES OF PUBLICATIONS WITH THE SAME TITLE. LIKE PREVIOUS PUBLICATIONS IT IS BASED ON STUDIES MANDATED BY THE SAFE DRINKING WATER ACT. THE REPORT IS DIVIDED INTO THREE CHAPTERS. CHAPTER ONE OUTLINES THE CRITERIA USED TO ASSESS THE TOXICITY OF 21 CHEMICAL CONTAMINANTS. IN CHAPTER TWO STUDIES ARE REVIEWED RELATED TO METABOLISM, HUMAN AND ANIMAL HEALTH EFFECTS, MUTAGENICITY, CARCINOGENICITY, AND TERATOGENICITY. IN CHAPTER THREE THE ADVERSE HEALTH EFFECTS OF ARSENIC AND ASBESTOS ARE REASSESSED IN LIGHT OF RECENT EPIDEMIOLOGICAL EVIDENCE.

AVAILABILITY: NATIONAL ACADEMY PRESS, WASHINGTON, DC

IRIS ACCESSION NUMBER: EWØ12887

PUBLICATION DATE: 85

TITLE: SEWAGE EFFECTS IN MARINE AND ESTUARINE ENVIRONMENTS. 1977-AUGUST 1985 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES: \*EFFLUENT: \*ENVIRONMENTAL IMPACT: \*ESTUARIES: \*MARINE ENVIRONMENT; \*OCEANS: \*SEWAGE: \*WASTE DISPOSAL: \*WATER QUALITY

DESCRIPTIVE NOTE: 205P. PRICE CODE: PC N01/MF N01. ORDER NO.: PB85-865863/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE EFFECTS OF DISPOSAL OF SEWAGE EFFLUENTS AND SLUDGE ON MARINE AND ESTUARINE ENVIRONMENTS. THE EFFECTS ON SPECIFIC FLORA AND FAUNA, OCEAN DUMPING PROBLEMS, AND POLLUTANT DISTRUBTION ANALYSIS ARE AMONG THE TOPICS CONSIDERED. REGIONAL AND SITE SPECIFIC STUDIES REGARDING ENVIRONMENTAL EFFECTS OF OCEAN WASTE DISPOSAL ARE PRESENTED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 225 CITATIONS, 20 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD. SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12888

PUBLICATION DATE: 8Ø

TITLE: APPLIED INDUSTRIAL HYGIENE (549).

DESCRIPTOR: \*ACCIDENT PREVENTION: \*INSTRUCTION! MATERIALS; \*INDUSTRIAL HYGIENE; \*MANUALS: \*POSTSECONDARY EDUCATION; \*SAFETY; \*TRAINING MANUALS; \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 314P. PRICE CODE: PC A14/MF AØ1. ORDER NO.: PB85-238996/WEP

ABSTRACT: THE TRAINING MANUAL FOR A COURSE IN INDUSTRIAL HYGIENE SPONSORED BY NIOSH, IS PRESENTED. THE COURSE IS DESIGNED TO FAMILIARIZE AN INDIVIDUAL WITH THE FUNDAMENTAL

PRINCIPLES OF INDUSTRIAL HYGIENE, WITH THE MAJOR EMPHASIS BEING ON HAZARD RECOGNITION, EVALUATION, AND CONTROL. THE COURSE CONSISTS OF AN INTRODUCTION AND LIGHT UNITS. THE INTRODUCTION DEALS WITH TOPICS SUCH AS LEGAL ASPECTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT, THRESHOLD LIMITS, BASIS CONCEPTS OF INDUSTRIAL TOXICOLOGY, AND TOXIC SUBSTANCES IN INDUSTRY. THE UNITS COVER GAS AND VAPOR SAMPLING, AIR FLOW MEASUREMENTS, PARTICULA]E SAMPLING, INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE, AND SPECIAL TOPICS. THE SPECIAL TOPICS UNIT INCLUDES TOPICS SUCH AS METHODS OF HAZARD CONTROL, PERSONAL PROTECTIVE EQUIPMENT, MANUFACTURING PROTECTIVE MATERIALS, THE WALKTHROUGH SURVEY, LEGAL ASPECTS AND RECORDKEEPING, AND ELECTRICAL AND MECHANICAL HAZARDS. THE UNITS ON GAS AND VAPOR SAMPLING, AIR FLOW MEASUREMENTS, INDUSTRIAL VENTILATION, HEAT STRESS, AND NOISE INCLUDE LABORATORY WORK. THE UNIT ON PARTICULATE SAMPLING INCLUDES HANDS ON EXPERIENCE WITH A RESPIRABLE DUST MONITOR.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12895

PUBLICATION DATE: 85

TITLE. SPECIAL REPORT: FLUID FLOW MEASUREMENT.

PERSONAL AUTHOR: CHEREMISINOFF, PAUL N.

DESCRIPTOR: \*EQUIPMENT; \*FLUID FLOW; \*FLOWMETERS; \*INSTRUMENTATION; \*MEASUREMENT; \*MEASUREMENT PROCEDURES

DESCRIPTIVE NOTE: 17-23P.

ABSTRACT: DESCRIBED ARE PROCEDURES AND EQUIPMENT FOR MEASURING FLUID FLOW.

AVAILABILITY: POLLUTION ENGINEERING: V17 N11

IRIS ACCESSION NUMBER: EWØ12896

PUBLICATION DATE: 85

TITLE: AQUIFER RESTORATION WITH ENHANCED BIORECLAMATION.

PERSONAL AUTHOR: BROWN, R. A.: AND OTHERS

DESCRIPTOR: \*AQUIFERS; \*AQUIFER RESTORATION; \*GROUNDWATER; \*CONTAMINATION; \*BIORECLAMATION: \*HYDROCARBONS; \*ORGANIC CHEMICALS; \*PFIFOLEUM; \*WATER POLLUTION CONTROL; \*WATER QUALITY

DESCRIPTIVE NOTE: 25-28P.

ABSTRACT DESCRIBED ARE METHODS FOR RESTORING AQUIFERS. BIORECLAMATION IS A PROCEDURE FOR REMEDIATING GROUNDWATER AQUIFERS CONTAMINATED WITH PETROLEUM HYDROCARBONS AND MANY CRGANIC CHEMICALS.

AVAILABILITY: POLLUTION ENGINEERING; V17 N11



IRIS ACCESSION NUMBER: EW#12897
PUBLICATION DATE: 85

TITLE: SPECIAL REPORT: CHEMICALS FOR WASTEWATER TREATMENT.

PERSONAL AUTHOR: NEWTON, JAMES J.

DESCRIPTOR: ALKALINE WASTES; ADSORPTION; \*CHEMICALS; COAGULATION; DISINFECTION; MICROORGANISMS; NEUTRALIZATION: NITROGEN; PHOSPHOROUS; \*OPERATIOS (WASTEWATER); SLUDGE; \*WASTEWATER TRIATMENT

DESCRIPTIVE NOTE: 42-47P.

ABSTRACT: INFORMATION IS PRESENTED ON VARIOUS CHEMICALS FOR WASTEWATER TREATMENT. USES OF THE CHEMICALS ARE DETAILED IN A TABLE AND IN THE DISCUSSION.

AVAILABILITY: POLLUTION ENGINEERING; V17 N11

IRIS ACCESSION NUMBER: EW#12898

PHRI ICATION DATE: 85

TITLE: DESIGNING INTERACTIVE VIDEO INSTRUCTION PROFESSIONALLY.

PERSONAL AUTHOR: RHODES, DENT M.: AZBELL, JANET WHITE

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*COMPUTER APPLICATIONS; \*DESIGN; \*INSTRUCTIONAL MATERIALS; \*INTERACTIVE VIDEO; \*TELEVISION; \*VIDEO INSTRUCTION

DESCRIPTIVE NOTE: 31-33P.

ABSTRACT: THIS ARTICLE DESCRIBES PROCEDURES FOR DESIGNING INTERACTIVE VIDEO INSTRUCTIONAL MATERIALS.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL; V39 N12

IRIS ACCESSION NUMBER: EW#12899

PUBLICATION DATE: 85

TITLE: HOW VIDEO CAN HELP.

PERSONAL AUTHOR: TORRENCE, DAVID R.

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*DESIGN; \*INSTRUCTION; \*RECOMMENDATIONS: \*TELEVISION: \*TRAINING

DESCRIPTIVE NOTE: 58-51P.

ABSTRACT: RESULTS OF RESCARCH ON LEARNING AND INSTRUCTION RELATED TO AUDIOVISUAL AIDS ARE APPLIED TO THE DESIGN AND USE OF TELEVISION.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL; V39 N12

IRIS ACCESSION NUMBER: EWØ129Ø9 PUBLICATION DATE: 85

TITLE: GROUNDWATER CONTAMINATION: A NATIONAL PROBLEM WITH IMPLICATIONS FOR STATE AND LOCAL ENVIRONMENTAL HEALTH PERSONNEL.

PERSONAL AUTHOR: BACON, J. MAICHLE: OLECKNO, WILLIAM A.

DESCRIPTOR: \*CONTAMINATION: \*GPOUNDWATER; FEDERAL ROLE; LOCAL ROLE; MONITORING; \*POLLUTION CONTROL; \*PUBLIC HEALTH; STATE ROLE; \*WATER SUPPLY; REGULATIONS; \*WATER TREATMENT

DESCRIPTIVE NOTE: 116-21P.

ABSTRACT: DESCRIBED ARE PROBLEMS RELATED TO GROUNDWATER CONTAMINATION INCLUDING PUBLIC HEALTH RISKS, POLITICAL DILEMMAS, AND SOME POSSIBLE SOLUTIONS.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V48 N3

IRIS ACCESSION NUMBER: EWØ1291Ø

PUBLICATION DATE: 85

TITLE: A SUMMARY OF WATERBORNE ILLNESS TRANSMITTED THROUGH CONTAMINATED GROUNDWATER.

PERSONAL AUTHOR: CRAUN, GUNTHER F.

DESCRIPTOR: CONTAMINATION; \*DISEASES; \*GROUNDWATER; HEALTH; \*ILLNESS; \*PUBLIC HEALTH; SURFACE WATER; \*TRENDS; WELL WATER; \*WATER SUPPLY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 122-27P.

ABSTRACT: SUMMARIZED IS INFORMATION ABOUT WATERFORNE ILLNESSES THAT ARE TRANSMITTED BY GROUNDWATER.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH: V48 N3

TRIS ACCESSION NUMBER: EWØ12911

PUBLICATION DATE: 85

TITLE: GROUNDWATER MONITORING WITHIN AN AQUIFER--A PROTOCOL.

PERSONAL AUTHOR: RAIL, CHESTER D.

DESCRIPTOR: \*GROUNDWATER; \*MANAGEMENT; \*MONITORING; \*PUBLIC HEALTH; \*PLANNING; \*POLLUTION CONTROL; \*REGULATIONS; \*WATER SUPPLY

DESCRIPTIVE NOTE: 128-32P.

ABSTRACT: PROVIDED IS INFORMATION ON HOW TO ESTABLISH A SYSTEMATIC GROUNDWATER MONITORING PLAN FOR ANY UNDERGROUND WATER SOURCE IN ORDER TO AVOID OR IDENTIFY WATER RELATED



PROBLEMS. ALTHOUGH THE EMPHASIS ON DEVELOPING A GROUNDWATER MONITORING PLAN IS PLACED AT THE LOCAL LEVEL, IT IS RECOGNIZED THAT IN SOME INSTANCES IMPLEMENTATION OF SUCH A PLAN MUST COME FROM STATE OR FEDERAL SOURCES.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V48 N3

IRIS ACCESSION NUMBER: EWØ12912

PUBLICATION DATE: 85

TITLE: THE PRESENT ROLE OF THE LOCAL HEALTH DEPARTMENT IN ENVIRONMENTAL TOXICOLOGY.

PERSONAL AUTHOR: WALKER, BAILUS, JR.

DESCRIPTOR: \*HEALTH DEPARTMENTS: \*EDUCATION: \*ENVIRONMENT; \*LOCAL ROLE; \*REGULATIONS: \*SERVICES; \*TOXICOLOGY

DESCRIPTIVE NOTE: 133-37P.

ABSTRACT: DISCUSSED IS THE ROLE OF THE LOCAL HEALTH DEPARTMENT IN ENVIRONMENTAL TOXICOLOGY. LOCAL HEALTH DEPARTMENT RESPONSIBILITY IS PRIMARILY IN THE AREAS OF EDUCATION, SERVICES, AND REGULATIONS.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V48 N3

IRIS ACCESSION NUMBER: EWØ12918
PUBLICATION DATE: 85

TITLE: WATER RESOURCES: EFFECTS OF LAND USE AND URBANIZATION. SEPTEMBER 1981-SEPTEMBER 1985 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES: \*LAND USE; MODELS: POLICIES: \*URBAN AREAS: \*WATER RESOURCES: WATER SUPPLY: WATER QUALITY

DESCRIPTIVE NOTE: 80P. PRICE CODE: PC N01/MF N01. ORDER NO.. PB85-867521/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE EFFECTS OF LAND USE AND URBAN DEVELOPMENT ON WATER SUPPLY, QUALITY AND QUANTITY. TOPICS INCLUDE APPROPRIATE LOCAL, STATE, AND FEDERAL GOVERNMENT POLICIES, AND UTILIZATION OF MATHEMATICAL MODELS AS PREDICTIVE TOOLS. STUDIES PERFORMED AT SPECIFIC LOCALITIES ARE INCLUDED IF THEY PROVIDE COMPREHENSIVE STRATEGIES THAT CAN BE APPLIED TO OTHER LOCATIONS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 89 CITATIONS, 18 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12919

PUBLICATION DATE: 85

TITLE: ENVIRONMENTAL IMPACTS: COMPUTER ANALYSIS. 1970-SEPTEMBER 1985 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: AIR POLLUTION; \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; \*COMPUTER ANALYSIS; \*ENVIRONMENTAL IMPACT: \*COMPUTER APPLICATIONS; \*DATA ANALYSIS; SIMULATIONS; SITE ANALYSES; WATER POLLUTION

DESCRIPTIVE NOTE: 310P. PRICE CODE: PC N01/MF N01. ORDER NO.: PB85-868198/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE USE OF COMPUTERIZED METHODS IN THE ANALYSIS OF ENVIRONMENTAL IMPACTS RELATED TO A VARIETY OF HUMAN ACTIVITIES. TOPICS INCLUDE DESCRIPTIONS AND LEVALUATIONS OF SPECIFIC SIMULATION PROGRAMS, SITE ANALYSES, AND EMPLOYMENT OF COMPUTER EQUIPMENT IN ENVIRONMENTAL DATA ANALYSIS. PLUME MIGRATION IN WATER AND AIR POLLUTION STUDIES, AND THE ANALYSIS OF AQUATIC AND TERRESTRIAL ECOSYSTEMS ARE AMONG THE APPLICATIONS CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 312 CITATIONS, 38 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ1292Ø PUBLICATION DATE: 85

TITLE: RESEARCH STRATEGIES FOR THE APPLICATION OF THE TECHNIQUES OF COMPUTATIONAL BIOLOGICAL CHEMISTRY TO ENVIRONMENTAL PROBLEMS.

PERSONAL AUTHOR: RABINOWITZ, J. R.

DESCRIPTOR: \*BIOLOGICAL CHEMISTRY; \*ENVIRONMENTAL PROBLEMS; \*RECOMMENDATIONS; \*RESEARCH NEEDS; \*TOXICOLOGY; \*WORKSHOPS

DESCRIPTIVE NOTE: PRICE CODE: PC AØ4/MF AØ1. ORDER NO.: PB85-238871/WEP

ABSTRACT: ON OCTOBER 25 AND 26, 1984, THE U.S. EPA SPONSORED A WORKSHOP TO CONSIDER THE POTENTIAL APPLICATIONS OF THE TECHNIQUES OF COMPUTATIONAL BIOLOGICAL CHEMISTRY TO PROBLEMS IN ENVIRONMENTAL HEALTH. ELEVEN EXTRAMURAL SCIENTISTS FROM THE VARIOUS RELATED DISCIPLINES AND A SIMILAR NUMBER OF AGENCY PERSONNEL PARTICIPATED. BRIEFING MATERIALS DESCRIBING SOME SPECIFIC AGENCY PROBL MS IN THE AREA WERE SENT TO THE EXTRAMURAL SCIENTISTS. EFORE THE MEETING. THE WORKSHOP'S GOAL WAS THE DEVELOPMENT OF A RESEARCH STRATEGY FOR THESE POTENTIAL APPLICATIONS. AT THIS WORKSHOP, FOUR CLASSES OF PROBLEMS WERE IDENTIFIED AND THE RECOMMENDATIONS OF THE PANEL FOR EACH CLASS WERE DRAFTED SEPARATELY. THE FOUR CLASSES WERE AS FOLLOWS: (1) METHODOLOGY FOR HANDLING DIVERSE STRUCTURE, (2) METHODOLOGY FOR HANDLING DATA SETS WITH SUBSTANTIAL STRUCTURAL SIMILARITIES, (3) THEORETICAL STRUCTURE—ACTIVITY STUDIES

USING CASUALLY RELATED MOLECULAR PARAMETERS, AND (4) APPLICATION POSSIBILITIES FOR ARTIFICIAL INTELLIGENCE DECISION AIDS IN THE EXISTING PREMANUFACTURE NOTIFICATION (PMN) REVIEW PROCESS. THE FINAL DOCUMENT WAS A PRODUCT OF THE ENTIRE PANEL. ALL MEMBERS AGREED ON THE NEED FOR EXPERIMENTAL TOXICITY DATA SETS DESIGNED FOR STRUCTUREACTIVITY RELATIONSHIP STUDIES. THE REPORT CONTAINS THE RECOMMENDATIONS OF THE PANEL. THE BRIEFING MATERIALS ARE CONTAINED IN THE APPENDICES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW#12921

PUBLICATION DATE: 79

TITLE: INTRODUCTION TO OCCUPATIONAL HEALTH (589).

PERSONAL AUTHOR: FERGUSON, J. S.

DESCRIPTOR: CHEMICALS; \*\* HEALTH; INDUSTRY; \*INSTRUCTIONAL MATERIALS; \*OCCUPATIONAL HEALTH; \*POSTSECONDARY EDUCATION; SAFETY; TOXICOLOGY

DESCRIPTIVE NOTE: 299P. PRICE CODE: PC A13/MF AØ1. ORDER NO.: PBR5-237998/WEP

ABSTRACT: THE COURSE, INTRODUCTION TO OCCUPATIONAL HEALTH, CONDUCTED BY THE NIOSH DIVISION OF TRAINING AND MANPOWER DEVELOPMENT, IS PRESENTED. THE COURSE IS INTENDED TO FAMILIARIZE THE STUDENT WITH CHEMICAL AND PHYSICAL AGENTS AND RELATED HAZARDS WHICH THE WORKER ENCOUNTERS IN THE WORK ENVIRONMENT. THE OBJECTIVES AND SCOPE OF OCCUPATIONAL HEALTH ARE DISCUSSED. THE BASIC CONCEPTS OF INDUSTRIAL TOXICOLOGY ARE CONSIDERED. RESPIRATORY DISEASES, SYSTEMIC POISONINGS, CHEMICAL HAZARDS IN THE INDUSTRIAL ENVIRONMENT ARE DESCRIBED. EVALUATION OF PHYSICAL HAZARDS IN THE INDUSTRIAL ENVIRONMENT ARE CONSIDERED. CONTROL OF THE INDUSTRIAL ENVIRONMENT IS CONSIDERED. CONTROL OF THE INDUSTRIAL ENVIRONMENT IS REVIEWED. PRINCIPLES OF VENTILATION AND HOOD DESIGN ARE PRESENTED. DILUTION VENTILATION IS DISCUSSED. PERSONAL PROTECTIVE EQUIPMENT IS CONSIDERED. THE INDUSTRIAL HYGIFNE ASPECTS OF FARM HAZARDS ARE NOTED. THE WALKTHROUGH THE PLACE OF ERGONOMICS IN SCIENCE AND INDUSTRY IS EXAMINED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12922

PUBLICATION DATE: 78

TITLE: OCCUPATIONAL SAFETY AND HEALTH: AN OVERVIEW (MODULE 1).

DESCRIPTOR: \*HEALTH; \*INSTRUCTIONAL MATERIALS; \*OCCUPATIONAL HEALTH; \*JCCUPATIONAL SAFETY; \*POSTSECONDARY EDUCATION; \*SAFETY

DESCRIPTIVE NOTE: 227P. PRICE CODE: PC A11/MF AØ1. ORDER NO.: PB85-238665/WEP

ABSTRACT: AN OVERVIEW OF OCCUPATIONAL SAFETY AND HEALTH AS PART OF A SERIES OF MODULES BEIMG DEVELOPED AND PROVIDED BY THE NIOSH DIVISION OF TRAINING AND MANPOWER DEVELOPMENT IS PRESENTED. THE MODULES ARE DESIGNED TO BE USED BY EDUCATORS TO PROVIDE ACADEMIC EDUCATION AS WELL AS CONTINUING EDUCATION AND SINGLE SUBJECT OUTREACH COURSES. THE MODULE CONSISTS OF THREE UNITS THAT ARE SUBDIVIDED INTO LESSONS. EACH LESSON CONTAINS SEVEN MAJOR COMPONENTS: TERMINAL AND ENABLINC OBJECTIVES, LESSON REQUIREMENTS, LESSON OUTLINE, DEMONSTRATION OUTLINE, PROBLEMS AND PRACTICE EXERCISES, SOLUTIONS TO THE PROBLEMS AND EXERCISES, AND VISUALS. UNIT 1 COVERS THE HISTORICAL DEVELOPMENT OF OCCUPATIONAL SAFETY AND HEALTH AND CONTAINS TWO LESSONS DEALING WITH THE DEVELOPMENT OF INTEREST IN WORKER SAFETY AND HEALTH AND THE DEVELOPMENT OF LEGISLATION AND STANDARDS. UNIT 2 IS CONCERNED √1TH THE OCCUPATIONAL SAFETY AND HEALTH ACT AND CONTAINS THREE LESSONS CONCERNED WITH THE DEVELOPMENT AND PROVISIONS OF THE ACT, REQUIREMENTS OF THE ACT. AND ENFORCEMENT OF THE ACT. THE THIRD MODULE CONTAINS THREE LESSONS GIVING AN OVERVIEW OF INDUSTRIAL SAFETY AND INDUSTRIAL HYGIENE. AND DISCUSSES THE ROLE OF THE PHYSICIAN, NURSE, OR ENVIRONMENTAL ENGINEER IN OCCUPATIONAL SAFETY AND HEALTH ACTIVITIES IN A TYPICAL ORGANIZATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12923

PUBLICATION DATE: 84

TITLE: OCCUPATIONAL CARCINOGENS: INSTRUCTORS RESOURCES GUIDE.

PERSONAL AUTHOR: BAPRON, C. I.: PIERCE, J. O.

DESCRIPTOR: \*INDUSTRY; \*CARCINOGENS; \*HEALTH; \*INSTRUCTIONAL MATERIALS; \*GUIDES; \*OCCUPATIONAL HEALTH: \*POSTSECONDARY EDUCATION; \*SAFETY; \*TOXICOLOGY

DESCRIPTIVE NOTE: 78P. PRICE CODE: PC A84/MF A81. ORDER NO.: PB85-235372/WEP

ABSTRACT: THE INSTRUCTOR'S RESOURCE GUIDE FOR A SHORT COURSE IN OCCUPATIONAL CARCINOGENESIS IS PRESENTED. THE COURSE CONSISTS OF EIGHT LESSON UNITS AND 1S DESIGNED PRIMARILY FOR USE BY OCCUPATIONAL HEALTH AND SAFETY PROFESSIONALS. EDUCATORS, AND REPRESENTATIVES OF BUSINESS AND GOVERNMENT AGENCIES. THE FIRST LESSON INTRODUCES THE STUDENT TO THE FIELD OF OCCUPATIONAL CARCINOGENESIS AND THE EXTENT AND MAGNITUDE OF THE PROBLEM IN TERMS OF ITS EFFECT ON HEALTH AND SOCIETY. LESSON 2 DEALS WITH THE TOXICOLOGICAL ELEMENTS OF CANCER DEVELOPMENT. THE THIRD LESSON DEALS WITH THE QUALITATIVE AND QUANTITATIVE CONSIDERATIONS UNDERLYING GOVERNMENTAL REGULATIONS OF CARCINOGENS. THE FOURTH LESSON COVERS THE GENERAL ROLE OF REGULATING OCCUPATIONAL CARCINOGENS. THE OSHA CANCER POLICY IS PRESENTED ALONG WITH THE PROPOSED MODEL STANDARD. LESSON 5 DEALS WITH OSHA INSPECTION PROCEDURES FOR CARCINOGENIC AGENTS. THE SIXTH



LESSON COVERS EMPLOYEE/EMPLOYER MEDICAL RECORDKEEPING AND MEDICAL SURVEILLANCE. LESSON 7 IS CONCERNED WITH RESPIRATORY PROTECTION AND PERSONAL PROTECTIVE EQUIPMENT. LESSON 8 CONTAINS A CASE HISTORY DESIGNED TO TEST THE ABILITY OF THE STUDENT TO ORGANIZE, AND RELATE THE APPROPRIATE TOPICS PRESENTED IN THE COURSE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12924

PUBLICATION DATE: 85

TITLE: IMPROVING EFFECTIVENESS IN PLANNING AND EQUITY FINANCING OF STATE WATER RESOURCES MANAGEMENT.

PERSONAL AUTHOR: PECK, J. C.; SMITH, R. L.

DESCRIPTOR: "EQUITY FINANCING: \*FINANCING: \*MANAGEMENT; \*PLANNING: \*STATE ROLE: \*WATER RESOURCES

DESCRIPTIVE NOTE: 131P. PP LE CODE: PC AØ7/MF AØ1. ORDER NO.: PB85-232981/WEP

ABSTRACT: AN ANALYSIS OF THE NATURE AND SCOPE OF STATE WATER RESOURCES PLANNING PROGRAMS IS UNDERTAKEN. THE RESULTS CLEARLY INDICATE STATE WATER PLANNING PROGRAMS CAN AND SHOULD SERVE MORE THAN PROJECT DEVELOPMENT ISSUES. TYPICALLY. STATE GOVERNMENT EXPENDITURES IN WATER RESOURCES MANAGEMENT CAN BE CLASSIFIED UNDER BROAD FUNCTIONAL HEADINGS OF PLANNING, REGULATION. DATA COLLECTION AND RESEARCH. AND PHYSICAL PROJECT DEVELOPMENT. IT IS CONCLUDED THAT THE BEST OPPORTUNITIES FOR SIGNIFICANT COST RECOVERY OF STATE WATER MANAGEMENT EFFORTS ARE FOUND WITHIN THE REGULATORY AND PROJECT DEVELOPMENT FUNCTIONS. THE POSSIBILITY OF RECOVERING ADMINISTRATIVE COSTS VIA A TAX OR FEE RELATED TO WATER RIGHTS IS EXPLORED. OTHER STATES TAX WATER RIGHTS IN VARIOUS WAYS. THE MOST COMMON METHOD AS A TAX ON REAL PROPERTY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE. 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12925

PUBLICATION DATE: 85

TITLE: CONSTRUCTION GRANTS PROGRAM FOR MUNICIPAL WASTEWATER TREATMENT WORKS: HANDBOOK OF PROCEDURES (JULY 1985 UPDATE).

DESCRIPTOR: \*COSTS; \*CONSTRUCTION GRANTS: \*DESIGN; \*FACILITIES; \*HANDBOOKS; \*MUNICIPALITIES; \*PLANNING; \*USEPA; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 95P. PRICE CODE: PC AØ5/MF AØ1. ORDER NO.: PB85-236Ø65/WEP

ABSTRACT: THE MUNICIPAL WASTEWATER TREATMENT CONSTRUCTION

GRANT AMENDMENTS OF 1981 (PL97-117) ELIMINATED STEP 1 AND STEP 2 GRANTS AFTER DECEMBER 29, 1981, AND REPLACED THEM WITH AN ALLOWANCE TO HELP DEFRAY THE COSTS OF PLANNING AND DESIGN. OTHER PROVISIONS REDUCED THE FEDERAL GRANT SHARE TO 55 PERCENT AFTER SEPTEMBER 3Ø, 1984; ELIMINATED GRANTS FOR COLLECTION SEWER SYSTEMS. MAJOR SEWER REHABILITATION, AND CORRECTION OF CSOS AFTER SEPTEMBER 3Ø, 1984 (EXCEPT UNDER CERTAIN CONDITIONS); REQUIRED STATES TO REEVALUATE THEIR WATER QUALITY STANDARDS; EMPHASIZED LOW COST ALTERNATIVES, PARTICULARLY FOR SMALL COMMUNITIES. THE HANDBOOK REFLECTS THE PROVISIONS OF THE 1981 AMENDMENTS AND ITS IMPLEMENTING REGULATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12926

PUBLICATION DATE: 85

TITLE: FULL-SCALE DEMONSTRATION OF TEXTILE DYE WASTEWATER REUSE.

PERSONAL AUTHOR: BERGENTHAL, J. F.; AND OTHERS

DESCRIPTOR: \*COSTS; \*DYES; \*INDUSTRIAL WASTES; \*MATERIALS RECOVERY; \*PERFORMANCE EVALUATION; \*RECYCLING; \*TEXTILE INDUSTRY; \*TECHNOLOGY; \*WASTEWATER TREATMENT; \*WATER REUSE

DESCRIPTIVE NOTE: 28P. PRICE CODE: PC A82/MF A81 ORDER NO.: PB85-219723/NEP

ABSTRACT: THE PAPER GIVES RESULTS OF AN EXAMINATION OF TECHNOLOGIES BY WHICH TEXTILE PROCESSING WASTEWATERS COULD OR REUSED, THEREBY REDUCING THE AMOUNTS RECYCLED TECHNOLOGIES, DYEBATH ONE OF THESE DISCHARGED. RECONSTITUTION AND REUSE, WAS INVESTIGATED IN DETAIL: IT WAS FOUND TO BE ENVIRONMENTALLY BENEFICIAL AND COST-EFFECTIVE. INSTEAD OF THE NORMAL PROCEDURE OF DISCHARGING THE EXHAUSTED DYEBATH. THIS TECHNOLOGY INVOLVES A PROCESS MODIFICATION WHEREIN THE DYEBATH IS RECONSTITUTED BY ADDING APPROPRIATE AMOUNTS OF MAKEUP DYES AND AUXILIARY CHEMICALS, THE RECONSTITUTED BATH CAN THEN BE REUSED FOR DYEING A SECOND BATCH OF TEXTILE GOODS, RESULTING IN SIGNIFICANT AUXILIARY CHEMICAL, ENERGY, AND WATER SAVINGS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ12927

TITLE: GROUNDWATER RESOURCES, A PRIMER FOR THE COMPACT DISTRICT OF THE OHIO RIVER BASI  $^{\rm M}$ 

DESCRIPTOR: BIBLIOGRAPHIES; \*GROUNDWATER: NATURAL RESOURCES; \*OHIO RIVER BASIN; \*WATER RESOURCES; \*WATER QUALITY; \*WATER SUPPLY

DESCRIPTIVE NOTE: PRICE: \$7.50

ABSTRACT: KEY DATA ON THE CONDITION AND SAFETY OF THE OHIO RIVER BASIN'S GROUNDWATER SUPPLIES IS STILL NEEDED, ACCORDING TO A REPORT RELEASED BY THE OF OR RIVER VALLEY WATER SANITATION COMMISSION. THE COMMISSION'S REPORT PRESENTS THE LATEST INFORMATION FROM LOCAL, STATE, AND FEDERAL AGENCIES ON GROUNDWATER RESOURCES. AND INCLUDES AN EXTENSIVE BIBLIOGRAPHY AND DETAILED MAP OF MAJOR AGUIFERS (WATER-BEARING ROCK FORMATIONS) AND POTENTIAL GROUNDWATER VIELDS. BECAUSE OF THE INCREASING NUMBER OF REPORTED CASES OF GROUNDWATER CONTAMINATION (TWO OF WHICH ARE DETAILED IN THE REPORT) AND THE INTERSTATE NATURE OF GROUNDWATER SUPPLIES, NEGLECT OF THIS RESOURCE WOULD HAVE SERIOUS AND FAR REACHING IMPLICATIONS. SUPPLY IS NOT A CRUCIAL ISSUE IN THE DISTRICT AT THIS TIME. ACCORDING TO THE COMMISSION REPORT, SOME 4.5 TRILLION GALLONS OF GROUNDWATER ARE IN STORAGE IN ONE AQUIFER ALONE; ALMOST 18 BILLION GALLONS ARE AVAILABLE FOR PUMPING ON A DAILY BASIS DISTRICT WIDE--ABOUT SEVEN TIMES THE CURRENT LEVEL OF USE BY AGRICULTURE, INDUSTRY, AND INDIVIDUALS. THE UNCERTAINTY OF THE IMPEWASTES--TOXIC OP OTHERWISE--MAKE FURTHER STUDY OF THIS RESOURCE DESIRABLE.

AVAILABILITY: OHIO RIVER VALLEY WATER SANITATION COMMISSION, 414 WALNUT STREET, CINCINNATI, OH 45282

IRIS ACCESSION NUMBER: EWØ12928

PUBLICATION DATE: 85

TITLE: WATER SUPPLY AND POLLUTION CONTROL (4TH EDITION).

PERSONAL AJTHOR: VIESSMAN, WARREN, JR.; HAMMER, MARK J.

DESCRIPTOR: FILTRATION; \*GROUNDWATER: \*POLLUTION CONTKOL; SEDIMENTATION; TCXIC SUBSTANCES; \*WATER QUALITY; \*WATER SUPPLY: WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 797P.

ABSTRACT: THIS EDITION INCLUDES UPDATED AND RECENT INFORMATION ON THE TREATMENT OF TOXIC SUBSTANCES, SEDIMENTATION, FILTRATION, PRESSURE FILTRATION OF SLUDGE, WASTEWATER RECLAMATION AND REUSE, AND WATER QUALITY MODELING. SPECIFIC CHAPTERS GIVE INFORMATION ON GROUND WATER, TOXIC WATER POLLUTANTS, SUSPENDED SOLIDS REMOVAL, AND CENTRIFUGATION.

AVAILABILITY: HARPER AND ROW, 10 EAST 53RD ST., NEW YORK, NY 10022

IRIS ACCESSION NUMBER: EWØ12929

TITLE: WATER SUPPLY AND SANITATION PROJECT HANDBOOK.

DESCRIPTOR: \*DEVELOPING COUNTRIES; CASE STUDIES; \*HANDBOOKS; GUIDELINES; \*PROJECT DEVELOPMENT; PROJECT EVALUATION; \*SANITATION; \*WATER SUPPLY

DESCRIPTIVE NOTE: PRICE \$22.90. THREE VOLUMES.

ABSTRACT: A PRACTICAL THREE-VOLUME GUIDE FOR PROJECT MANAGERS, THE HANDBOOK SUPPLIES GUIDELINES AND CASE STUDIES FOR PLANNERS, ENGINEERS, COMMUNITY DEVELOPMENT AND PUBLIC HEALTH SPECIALISTS WORKING ON PROJECTS RELATED TO WATER AND SANITATION IN DEVELOPING COUNTRIES, AND HELPS USERS TO PREPARE PROJECT REPORTS. EACH PHASE OF PROJECT DEVELOPMENT SUCH AS IDINTIFICATION. PREFEASIBILITY AND FEASIBILITY IS ILLUSTRATED WITH CASE STUDIES. APPROACHES AND METHODS OF PROJECT EVALUATION ARE ALSO PRESENTED AS A GUIDE TO PROJECT TEAM MEMBERS.

AVAILABILITY: THE WORLD BANK. 1818 H STREET, N.W., WASHINGTON, DC 20433

IRIS ACCESSION NUMBER: EWØ1293Ø

PUBLICATION DATE: 85

TITLE: WASTEWATER TREATMENT (LANTS--PLANNING, DESIGN, AND OPERATION.

PERSONAL AUTHOR: QASIM, SYED R.

DESCRIPTOR: \*DESIGN: \*FACILITIES: \*OPERATIONS (WASTEWATER); \*PLANNING: \*TECHNOLOGY: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 726P.

ABSTRACT: THE INTENT OF THIS BOOK IS TWOFOLD: FIRST, TO SUMMARIZE DEVELOPMENTS IN PLANNING AND DESIGNING WASTEWATER TREATMENT FACILITIES THAT HAVE RESULTED FROM TECHNOLOGICAL ADVANCES IN THE FIELD, AND THOSE THAT HAVE RESULTED FROM POLICIES ENFORCED BY ENVIRONMENTAL LAWS AND THE SUBSEQUENT GUIDELINES; AND SECOND, TO DEVELOP STEP-BY-STEP PROCEDURES FOR PLANNING, DESIGNING, AND OPERATING A MEDIUM SIZE WASTEWATER TREATMENT PLANT. DESIGN PROCEDURES GIVEN ARE FOR ILLUSTRATION AND GENERAL INFORMATION ONLY; A MODEL FACILITY PLAN FOR A WASTEWATER TREATMENT PLANT IS DEVELOPED AND DESIGN CALCULATIONS, EQUIPMENT SELECTION, ENGINEERING DRAWINGS, OPERATION AND MAINTENANCE, AND PLANS AND SPECIFICATIONS OF VARIOUS TREATMENT UNITS ARE PRESENTED.

AVAILABILITY: CBS COLLEGE PUBLISHING, HOLT, RINEHART AND WINSTON, 283 MADISON AVENUE, NEW YORK, NY 18817

IRIS ACCESSION NUMBER: EWØ12933

PUBLICATION DATE: 84

TITLE: COSTS OF REMEDIAL PESPONSE ACTIONS AT UNCONTROLLED HAZARDOUS WASTE SITES. POLLUTION TECHNOLOGY REVIEW NO. 105.

PERSONAL AUTHOR: RISHEL, H. L.; AND OTHERS

DESCRIPTOR: \*COSTS: \*HAZARDOUS WASTES: \*HAZARDOUS WASTE SITES: \*LANDFILLS: \*MONITORING: \*REMEDIAL RESPONSES; \*SURFACE IMPOUNDMENTS: \*UNIT PROCESSES: \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 144P. PRICE: \$32.00. ORDER NO.: ISBN-0-8155-0969-3.





ABSTRACT: THIS BOOK PRESENTS CONCEPTUAL DESIGN COST ESTIMATES FOR REMEDIAL RESPONSE ACTIONS AT UNCONTROLLED HAZARDOUS WASTE SITES. THIRTY-FIVE UNIT OPERATIONS, COVERING UNCONTROLLED LANDFILL OR SURFACE IMPOUNDMENT DISPOSAL SITES. WERE COSTED IN MID-198Ø DOLLARS FOR THE NEWARK, NEW JERSEY AREA: AND UPPER AND LOWER COST AVERAGES FOR THE CONTIGUOUS 48 STATES WERE ALSO PREPARED. THE DATA IN THE BOOK ARE BASED ON A REVIEW OF PERTINENT LITERATURE WITH SUBSEQUENT CONVERSION TO A CONSISTENT COMPUTATIONAL FRAMEWORK SUCH THAT COSTS OF REMEDIAL RESPONSE OPTIONS CAN BE READILY COMPARED.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12934

PUBLICATION DATE: 84

TITLE: ACID RAIN INFORMATION BOOK. SECOND EDITION.

PERSONAL AUTHOR: BUBENICK, DAVID V., ED.

DESCRIPTOR: \*ACID RAIN: \*ENVIRONMENTAL IMPACT: \*MODELS: \*MONITORING: \*POLICIES: \*RESFARCH REPORTS: \*RESEARCH NEEDS: \*REGULATIONS

DESCRIPTIVE NOTE: 397P. PRICE: \$39.00. ORDER NO.: ISBN-0-8155-0967-7

ABSTRACT: THE SECOND EDITION DISCUSSES THE MAJOR ASPECTS OF THE ACID RAIN PROBLEM WHICH EXISTS TODAY WITH MUCH NEW INFORMATION: IT POINTS OUT THE AREAS OF UNCERTAINTY AND SUMMARIZES CURRENT AND PROJECTED RESEARCH BY VARIOUS GOVERNMENT AGENCIES AND OTHER CONCERNED ORGANIZATIONS. THIS EDITION IS A REVISED AND GREATLY ENLARGED VERSION OF THE ORIGINAL ACID RAIN INFORMATION BOOK PUBLISHED IN 1982. THE BOOK IS ORGANIZED IN A LOGICAL PROGRESSION FROM SOURCES OF POLLUTANTS AFFECTING ACID RAIN FORMATION TO THE ATMOSPHERIC TO THE DEPOSITION OF ACID RAIN, THE EFFECTS OF THAT DEPOSITION, MONITORING AND MODELING PROCEDURES. AND POSSIBLE MITIGATIVE MEASURES AND REGULATORY OPTIONS. THIS INFORMATION IS FOLLOWED BY A DISCUSSION OF UNCERTAINTIES IN THE UNDERSTANDING OF ACID RAIN AND A DESCRIPTION OF CURRENT AND PROPOSED RESEARCH.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12935

PUBLICATION DATE: 84

TITLE: EVALUATION OF REMEDIAL ACTION UNIT OPERATIONS AT HAZARDOUS WASTE DISPOSAL SITES. POLLUTION TECHNOLOGY REVIEW NO. 110.

PERSONAL AUTHOR: EHRENFELD, JOHN; BASS, JEFFREY.

DESCRIPTOR: AIR; \*CONTROL TECHNOLOGIES; \*DISPOSAL SITES;

\*HAZARDOUS WASTES; GROUNDWATER; \*POLLUTION CONTROL; \*REMEDIAL ACTION; SOIL; \*TECHNOLOGY; \*WASTE DISPOSAL; \*TREATMENT TECHNOLOGYSS; SURFACE WATER

DESCRIPTIVE NOTE: 434P. PRICE: \$39.00. ORDER NO.: ISBN-0-8155-0998-7

ABSTRACT: UNIT OPERATIONS FOR REMEDIAL ACTION AT HAZARDOUS WASTE DISPOSAL SITES ARE EVALUATED IN THIS BOOK. TECHNICAL INFORMATION IS PROVIDED WHICH POTENTIALLY COULD BE USED TO EVALUATE LONG TERM REMEDIAL ACTION PLANS FOR CONTROLLING OR TREATING WASTES OR LEACHATES AT UNCONTROLLED HAZARDOUS WASTE SITES. THE BOOK CONTAINS INFORMATION ON OVER 50 REMEDIAL ACTION UNIT OPERATIONS. A BRIEF DESCRIPTION, STATUS, FACTORS FOR DETERMINING FEASIBILITY AND RELIABILITY, PRINCIPAL DATA REQUIREMENTS, AND BASIC INFORMATION FOR COST REVIEW ARE GIVEN FOR EACH TECHNOLOGY. IN ADDITION A GENERAL DISCUSSION OF THE MAJOR PATHWAYS AND ASSOCIATED REMEDIAL APPROACHES AND OF MONITORING TECHNIQUES HAS BEEN INCLUDED.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12936

PUBLICATION DATE: 85

TITLE: LEACHATE FROM MUNICIPAL LANDFILLS: PRODUCTION AND MANAGEMENT. POLLUTION TECHNOLOGY REVIEW NO. 119.

PERSONAL AUTHOR: LU. JAMES C. S.: AND OTHERS

DESCRIPTOR: \*LANDFILLS; \*LEACHATE; \*MONITORING; \*MUNICIPAL LANDFILLS: \*POLLUTION CONTROL; \*TECHNOLOGY; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 453P. PRICE: \$42.00. ORDER NO.: ISBN-0-8155-1021-7

MANAGEMENT OF LEACHATE FROM PRODUCTION AND ABSTRACT: MUNICIPAL LANDFILLS ARE EVALUATED IN THIS BOOK, FOR THE PURPOSE OF IDENTIFYING INFORMATION AND TECHNIQUES USEFUL TO DESIGN ENGINEERS AND SITE OPERATORS. ALSO ASSESSED ARE: ADVANTAGES. LIMITATIONS, AND COMPARATIVE COSTS OF VARIOUS ESTIMATION AND MITIGATION APPROACHES, FOR THE ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS. MANAGEMENT OPTIONS, AND ADDITIONAL RESEARCH NEEDS ON THE GENERATION, CONTROL. AND MONITORING OF LANDFILL LEACHATES. THE OBJECTIVES OF THIS STUDY ARE: (1) TO CLARIFY THE UNDERSTANDING OF LEACHATE PRODUCTION AND MANAGEMENT OPTIONS THROUGH A CRITICAL REVIEW AND ANALYSIS OF EXISTING INFORMATION, (2) TO IDENTIFY PRACTICAL INFORMATION AND TECHNIQUES WHICH CAN BE USED BY DESIGN ENGINEERS AND SITE OPERATORS, (3) TO DELINEATE WEAKNESSES IN THE AVAILABLE DATA BASE, AND (4) TO IDENTIFY TECHNIQUES WHICH MAY BE USEFUL IN THE ESTIMATION AND MITIGATION OF ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS CAUSED BY LEACHATE GENERATION. THIS INFORMATION IS PRESENTED N TERMS OF THE FOLLOWING SUBJECT AREAS: LEACHATE GENERATION, TERMS OF THE FOLLOWING SUBJECT AREAS: LEACHATE GENERATION, LEACHATE COMPOSITION, LEACHATE MIGRATION, AVAILABLE CONTROL TECHNOLOGY, AND ENVIRONMENTAL MONITORING.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656



IRIS ACCESSION NUMBER: EWØ12937 PUBLICATION DATE: 85

TITLE: CORROSION PREVENTION AND CONTROL IN WATER TREATMENT AND SUPPLY SYSTEMS. POLLUTION TECHNOLOGY REVIEW NO. 122.

PERSONAL AUTHOR: SINGLEY, J. E.; AND OTHERS

DESCRIPTOR: CORROSION: \*CORROSION PREVENTION: \*CORROSION CONTROL: ECONOMICS: PIPES: TANKS: \*WATER DISTRIBUTION: \*WATER TREATMENT

DESCRIPTIVE NOTE: 313P. PRICE: \$42.00. ORDER NO.: ISBN-0-8155-1031-4

ABSTRACT: CORROSION PREVENTION AND CONTROL METHODOLOGY FOR WATER TREATMENT AND SUPPLY SYSTEMS IS DETAILED IN THIS BOOK. THE BOOK IS PRESENTED IN TWO PARTS. PART I IS BASICALLY A GUIDANCE MANUAL FOR CORROSION CONTROL WITH SECTIONS ON HOW AND WHY CORROSION OCCURS AND HOW BEST TO HANDLE IT. PART II REVIEWS THE VARIOUS MATERIALS USED IN THE WATER WORKS INDUSTRY AND THEIR CORROSION CHARACTERISTICS, AS WELL AS MCNITORING AND DETECTION TECHNIQUES. EMPHASIS IS PLACED ON ASSESSING THE CONDITIONS AND WATER QUALITY CHARACTERISTICS DUE TO THE CORROSION OR DETERIORATION OF EACH OF THESE MATERIALS.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12938

PUBLICATION DATE: 85

TITLE: HANDBOOK OF TOXIC AND HAZARDOUS CHEMICALS AND CARCINOGENS, 1985. SECOND EDITION.

PERSONAL AUTHOR: SITTIG, MARSHALL

DESCRIPTOR: \*CARCINOGENS; \*CHEMICALS; \*DISPOSAL; \*HANDBOOKS; \*HAZARDOUS MATERIALS: \*HAZARDOUS WASTES; \*ENVIRONMENTAL IMPACT: \*PUBLIC HEALTH; \*SAFETY: \*TOXIC SUBSTANCES; \*TOXICOLOGY

DESCRIPTIVE NOTE: 950P. PRICE: \$96.00. ORDER NO.: ISBN-0-8155-1009-8

ABSTRACT: THE SECOND EDITION OF THIS HANDBOOK PRESENTS CONCISE CHEMICAL, HEALTH AND SAFETY INFORMATION ON NEARLY 800 TOXIC AND HAZARDOUS CHEMICALS AND CARCINOGENS (UP FROM NEARLY 600 IN THE PREVIOUS EDITION). THE ADDITION OF CARCINOGENS TO THE HANDBOOK INCREASES ITS VALUE CONSIDERABLY OVER THE PREVIOUS EDITION. IT ENABLES RESPONSIBLE DECISIONS TO BE MADE BY CHEMICAL MANUFACTURERS, SAFETY EQUIPMENT PRODUCERS, TOXICOLOGISTS, INDUSTRIAL SAFETY ENGINEERS, WASTE DISPOSAL OPERATORS, HEALTH CARE PROFESSIONALS, AND THE MANY OTHERS WHO MAY HAVE CONTACT WITH OR INTEREST IN THESE CHEMICALS DUE TO THEIR OWN OR THIRD PARTY EXPOSURE.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12939 PUBLICATION DATE: 85

TITLE: ELECTROPLATING WASTEWATER POLLUTION CONTROL TECHNOLOGY. POLLUTION TECHNOLOGY REVIEW NO. 115.

PERSONAL AUTHOR: CUSHNIE, GEORGE C., JR.

DESCRIPTOR: COSTS; DESIGN; EFFLUENTS; \*ELECTROPLATING INDUSTRY; \*INDUSTRIAL WASTES; MATERIAL RECOVERY; \*POLLUTION CONTROL; RECYCLING; \*TECHNOLOGY: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 239P. PRICE: \$36.88. ORDER NO.: ISBN-8-8155-1817-9

ABSTRACT: MORE THAN 27 POLLUTION CONTROL TECHNOLOGIES WHICH HAVE APPLICATION TO WASTEWATERS GENERATED BY ELECTROPLATING OPERATIONS ARE PRESENTED IN THIS PRACTICAL AND TIMELY MANUAL. DESIGN AND COST INFORMATION ARE PROVIDED FOR THESE TECHNOLOGIES, WHICH ENCOMPASS CONVENTIONAL TREATMENT, ALTERNATE TREATMENT 1ATERIAL RECOVERY TECHNIQUES AND PROCESSES, AND NEW PLA BATH FORMULATIONS. IN ADDITION, A SECTION ON IN-PLANT PK 'ESS CHANGES HAS BEEN INCORPORATED INTO THE BOOK. THIS SECTION INCREASES THE USEFULNESS OF THE MANUAL IN THAT IT HIGHLIGHTS NONCAPITAL-INTENSIVE CHANGES TO CURRENT PRACTICES AND/OR PROCESSES THAT MAY HAVE SIGNIFICANT BEARING ON THE REDUCTION OF OVERALL CHEMICAL AND WATER USAGE COSTS, AS WELL AS CONSEQUENT WATER TREATMENT NEEDS AND DISPOSAL COSTS. THE DOCUMENT IS INTENDED TO SERVE AS A GUIDE FOR TECHNICAL PERSONNEL MAKING DECISIONS ON APPROPRIATE MEANS OF MEETING EFFLUENT LIMITS.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EV/Ø1294Ø

PUBLICATION DATE: 84

TITLE: REMOVAL OF METALS FROM WASTEWATER: NEUTRALIZATION AND PRECIPITATION.

PERSONAL AUTHOR: CUSHNIE, GEORGE C., JR.

DESCRIPTOR: COSTS: DESIGN: \*INDUSTRIAL WASTES: \*METALS: \*MATERIAL RECOVERY: \*NEUTRALIZATION: \*PRECIPITATION: RESOURCE RECOVERY: \*TECHNOLOGY: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 232P. PRICE: \$32.00. ORDER NO.: ISBN-0-8155-0976-6

ABSTRACT: THIS BOOK IS A MANUAL OF DESIGN AND OPERATING PROCEDURES FOR THE KEMOVAL OF METALS FROM INDUSTRIAL WASTEWATERS BY NEURALIZATION AND PRECIPITATION. ALSO COVERED ARE METHODS FOR HANDLING AND DISPOSAL OF RESIDUES FROM THE TREATMENT PROCESSES. EFFLUENT LIMITATIONS FOR POINT SOURCE DISCHARGES INTO WATERWAYS OR PUBLICLY OWNED TREATMENT WORKS HAVE PLACED PARTICULAR EMPHASIS ON THE CONTROL OF TOXIC MATERIALS. AMONG THE TOXIC MATERIALS IDENTIFIED BY THE PA ARE THE HEAVY METALS INCLUDING BERYLLIUM, CADMIUM, CHROMIUM, COPPER, LEAD, MERCURY, NICKLE, SILVER, THALLIUM,



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AND ZINC. THIS MANUAL IS DESIGNED AS A PRACTICAL GUIDE TO THE MANAGEMENT OF A WASTEWATER TREATMENT PROGRAM FOR THOSE INVOLVED WITH THE REMOVAL OF METALS FROM WASTEWATERS. THE BOOK REVIEWS LEGAL REQUIREMENTS, WASTEWATER MANAGEMENT PRACTICES, FUNDAMENTAL PROCESS CHEMISTRY, ENGINEERING DESIGN CONCEPTS AND PROCEDURES, COST ESTIMATION, THE STATE OF THE ART OF CONT. JL OF PRECIPITATE PROPERTIES, AND METHODS USED FOR SLUDGE TREATMENT AND DISPOSAL. NUMEROUS GRAPHICAL ILLUSTRATIONS AND AN APPENDIX OF SAMPLE PROBLEMS ARE INCLUDED.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE. PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12941

PUBLICATION DATE: 84

ITLE: POST-ACCIDENT PROCEDURES FOR CHEMICALS AND PROPELLANTS. POLLUTION TECHNOLOGY REVIEW NO. 189.

PERSONAL AUTHOR: SHAVER, DEBORAH K.: BERKOWITZ, ROBERT L.

DESCRIPTOR: \*ACCIDENTS; \*CHEMICALS; \*HAZARD ASSESSMENT; \*HAZARDOUS MATERIALS; PLANNING; \*PROPELLENTS: RESPONSE GUIDELINES; \*SAFETY: TRAINING; TRANSPORTATION

DESCRIPTIVE NOTE: 236P. PRICE: \$32.00. ORDER NO.: ISBN-0-8155-0986-3

ABSTRACT: GUIDELINES FOR RESPONDING TO HAZARDOUS MATERIALS TRANSPORTATION ACCIDENTS ARE PRESENTED IN THIS BOOK. NATIONWIDE CONCERN ABOUT THE CONTROL AND MANAGEMENT OF HAZARDOUS MATERIALS MAKES THIS STUDY BOTH TIMELY AND RELEVANT. THIS STATE OF THE ART ASSESSMENT WAS PREPARED TO DEVELOP TECHNOLOGY WHICH WILL MINIMIZE THE HAZARDS AND ENVIRONMENTAL DAMAGE FROM TRANSPORTATION ACCIDENTS OR OTHER SPILLS OF LARGE VOLUME. WIDELY-USED INDUSTRIA! CHEMICALS AND PROPELLANTS. ALL RESPONSE ACTIVITIES REQUIRING ATTENTION FROM DECISION-MAKEPS HAVE BEEN COMBINED INTO A SINGLE, CCHERENT, COMPREHENSIVE USER'S MANUAL. SPECIFIC ATA ARE PRESENTED ON THE HAZARDOUS MATERIALS, AND GUIDELINES ARE GIVEN FOR POST-ACCIDENT HANDLING PROCEDURES SUCH AS REPORTING AN ACCIDENT HANDLING PROCEDURES SUCH AS REPORTING AN ACCIDENT: INITIATING THE RESPONSE COMMUNICATIONS NETWORK; FIRST ONSCENE RESPONDERS; ASSESSING THE ACCIDENT SCENE: DETERMINING THE MAGNITUDE OF THE ACCIDENT SCENE: DETERMINING THE MAGNITUDE OF THE ACCIDENT AND ESTIMATING THE DANGER AREAS FROM VAPOR DISPERSION: CONTAINMENT; VAPOR SUPPRESSION; HANDLING LEAKS: SELECTION OF PERSONNEL, EQUIPMENT AND MATERIALS; FIREFIGHTING; EVACUATION: CARGO TRANSFER. WRECKAGE REMOVAL AND CLEANUP DISPOSAL ACTIVITIES. PERTINENT LEGISLATION AND REGULATIONS ARE ALSO REVIEWED.

AVAILABILITY: NOYES PUBLICATIONS. NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE. NJ Ø7656

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IRIS ACCESSION NUMBER: EWØ12942

PUBLICATION DATE: 85

TITLE: SLURRY TRENCH CONSTRUCTION FOR POLLUTION MIGRATION CONTROL. POLLUTION TECHNOLOGY REVIEW NO. 118

PERSONAL AUTHOR: SPOONER, PHILIP; AND OTHERS

DESCRIPTOR: CONSTRUCTION; DESIGN; COSTS; \*HAZARDOUS WASTES; \*POLLUTION CONTROL; SITE EVALUATION: \*SLURRY TRENCHES; \*SLURRY WALLS; \*TOXIC SUBSTANCES: \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 237P. PRICE: \$36.00. ORDER NO.: ISBN-0-8155-1020-9

ABSTRACT: THIS BOOK IS AN IN-DEPTH DESCRIPTION OF THE CURRENT STATE OF THE ART OF SLURRY TRENCH CONSTRUCTION. BACKGROUND MATERIAL FOR THE EVALUATION OF POLLUTION MIGRATION CONTROL BY SLURRY WALLS, AS WELL AS CONSTRUCTION TECHNIQUES AND COST DATA, ARE INCLUDED. AFTER THE PRESENTATION OF THE FUNDAMENTALS OF SLURRY WALL USE, THE PROCEDURES FOR PLANNING A SLURRY WALL INSTALLATION ARE GIVEN. THESE INCLUDE SITE INVESTIGATION PROCEDURES FOR CHARACTERIZING THE SURFACE AND SUBSURFACE CONDITIONS, AS WELL AS WASTE AND LEACHATE CHARACTERIZATION. THE FACTORS CONSIDERED IN SL'RRY WALL DESIGN ARE THEN PRESENTED, FOLLOWED BY AN OU INE OF ACCEPTED CONSTRUCTION PRACTICES. THE NECESSARY METHORS TO MONITOR AND MAINTAIN A COMPLETED SLURRY WALL ARE ALSO INCLUDED, ALONG WITH THE FACTORS THAT INFLUENCE COSTS. THE HANDBOOK CONCLUDES WITH A SERIES OF A SLURRY WALL INSTALLATION.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12943

PUBLICATION DATE: 85

TITLE: CONTAMINANT REMOVAL FROM PUBLIC WATER SYSTEMS. POLLUTION TECHNOLOGY REVIEW NO. 120.

PERSONAL AUTHOR: HOUCK, DANIEL C.: AND OTHERS

DESCRIPTOR: \*COSTS; \*MICROORGANISMS; \*MAINTENANCE: \*NITRATES; \*OPERATIONS (WATER); \*RADIONUCLIDES; \*TURBIDITY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 524P. PRICE: \$52,00. ORDER NO.: ISBN-8-8155-1022-5

ABSTRACT: BASED ON STUDIES BY D.H. HOUCK ASSOCIATES; RIP G. RICE, INC.; WADE MILLER ASSOCIATES; PURDUE UNIVERSITY AND THE CITY OF INDIANAPOLIS, INDIANA; AND ENVIRONMENTAL SCIENCE AND EMGINEERING, INC.; THIS BOOK DESCRIBES THE RATIONALE AS WELL AS MEDINODS FOR CONTAMINANT REMOVAL FROM PUBLIC WITTER SYSTEMS. E BOOK IS FOR USE BY OWNERS AND OPERATURS, MUMP PAL MAGGERS AND CONSULTING ENGINEERS INVOLVED WITH THE FE AND EFFICIENT OPERATION OF PUBLIC WATER SYSTEMS. ITS POSE IS TO ASSIST PERSONNEL IN UNDERSTANDING THE

IMPORTANCE OF CONTAMINANT CONTROL AND TO EXPLAIN DESIGN CONCEPTS, COST ESTIMATING TECHNIQUES, AND OPERATIONAL CONSIDERATIONS ASSOCIATED WITH CURRENT TECHNOLOGICAL APPROACHES FOR MAINTAINING SUCH CONTROL. THE BOOK IS DIVIDED INTO FOUR PARTS, EACH DEALING WITH A DISTINCT TYPE OF CONTAMINANT REMOVAL. PROBLEM AREAS COVERED ARE MICROORGANISMS, NITRATES, RADIONUCLIDES, AND TURBIDITY.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12944

PUBLICATION DATE: 85

TITLE: TOXIC SUBSTANCE STORAGE TANK CONTAINMENT. POLLUTION TECHNOLOGY REVIEW NO. 116.

CORROSION CONTROL: DESCRIPTOR: ACCIDENT PREVENTION: \*CONTAINMENT; INSPECTION; MAINTENANCE; \*FACILITIES; SPILL CONTROL: \*SAFETY PROGRAMS: \*STORAGE TANKS; TRAINING; \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 274P, PRICE: \$36.00. ORDER NO.: ISBN- $\emptyset - 8155 - 1018 - 7$ 

ABSTRACT: THIS BOOK PROVIDES BASIC GUIDELINES UPON WHICH A TOXIC SUBSTANCE STORAGE TANK CONTAINMENT ASSURANCE AND SAFETY PROGRAM MIGHT BE SASED. IT INCLUDES GUIDELINES FOR MAINTENANCE, INSPECTION, AND EMERGENCY PROCEDURES, AS WELL AS REFERENCES TO THE APPROPRIATE STANDARDS AND CODES WITH WHICH STORAGE TANKS SHOULD BE IN COMPLIANCE, THIS BOOK PROVIDES THE BASIS FOR FACILITY EVALUATION, IT IS PRESENTED IN TWO PARTS WHICH COVER GUIDELINES AND PROCEDURES, AND TECHNICAL CODE APPLICATION,

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12945

PUBLICATION DATE: 84

TITLE: ENVIRONMENTAL CONTROL FOR PULP AND PAPER MILLS. POLLUTION TECHNOLOGY REVIEW NO. 108.

PERSONAL AUTHOR: EDDE, HOWARD

DESCRIPTOR: \*AIR POLLUTION CONTROL; DESIGN; \*INDUSTRIAL WASTES; OPERATIONS; PLANNING; \*PAPER INDUSTRY; \*PULP INDUSTRY; SOLID WASTES; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 179P, PRICE: \$32.00, ORDER NO.: ISBN-Ø-8155-Ø979-Ø

ABSTRACT: THE PURPOSE OF THIS BOOK IS TO PROVIDE THE PULP AND PAPER INDUSTRY ENGINEERING COMMUNITY WITH A NEW SOURCE OF INFORMATION FOR USE IN THE PLANNING, DESIGN AND OPERATION OF PRESENT AND FUTURE ENVIRONMENTAL CONTROL FACILITIES, NEW POLLUTION CONTROL METHODS ARE DESCRIBED, AND THE

APPLICATIONS OF NEW TECHNIQUES FOR MORE EFFECTIVELY REMOVING BROAD SPECTRUM OF CONTAMINANTS FROM AIR AND WATER DISCHARGES ARE DISCUSSED. THE INFORMATION WILL ALSO BE USEFUL AS TEXT MATERIAL FOR STUDENTS IN PULP AND PAPER TECHNOLOGY AND INDUSTRIAL WASTE ENGINEERING. THE BOOK CONTAINS TWO PARTS: THE FIRST DESCRIBES WATER AND SOLID WASTE POLLUTION CONTROL FOR THE PULP AND PAPER INDUSTRY, WHILE THE SECOND PRESENTS AIR POLLUTION CONTROL.

AVAILABILITY: NOYES FUELICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12946

PUBLICATION DATE: 84

TITLE: GENETIC ENGINEERING AND NEW POLLUTION CONTROL TECHNOLOGIES. POLLUTION TECHNOLOGY REVIEW NO. BIOTECHNOLOGY REVIEW NO. 3.

PERSONAL AUTHOR: JOHNSTON, JAMES B.: ROBINSON, SUSAN G.

DESCRIPTOR: \*BIOLOGICAL TREATMENT; \*GENETIC ENGINEERING; \*POLICIES: \*POLLUTION CONTROL: \*RESEARCH NEEDS: \*TECHNOLOGY: \*WASTE TRÉATMENT

DESCRIPTIVE NOTE: 131P. PRICE: \$32.00. ORDER NO,: ISBN-Ø-8155-Ø973-1

ABSTRACT: THIS BOOK DOCUMENTS THE BASIS FOR THE USE OF GENETIC TECHNOLOGY TO DEVFLOP NEW POLLUTION CONTROLS IN THE AREA OF WASTE TREATMENT; IT DESCRIBES THE CURRENT STATE OF THE ART AND RECOMMENDS A FUTURE RESEARCH APPROACH, THE BOOK BASED ON INFORMATION EMERGING FROM EXPERT PANEL DISCUSSIONS COVERING POLLUTION PROBLEMS, GENE MANIPULATIONS, AND NATURAL LIMITS TO BIODEGRADATION. THE STUDY PROVIDES BACKGROUND INFORMATION FOR SCIENTISTS, ENGINEERS, RESEARCH MANAGERS, AND OTHER DECISION-MAKERS FOR THE FVALUATION OF OPPORTUNITIES FOR IMPROVING BIOLOGICAL WASTE TREATMENT. POLICY ISSUES: RESEARCH PROBLEMS, AND SCIENTIFIC RESOURCES THAT BEAR ON POLLUTION ABATEMENT THROUGH GENETIC ENGINEERING THE BOOK IS INTENDED TO PROMOTE AN APPROACH TO A PROMISING NEW GENETIC IDENTITIED. INTERDISCIPLINARY TECHNOLOGY.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12947

FUBLICATION DATE: 84

TITLE: HANDBOOK OF LAND TREATMENT SYSTEMS FOR INDUSTRIAL AND MUNICIPAL WASTES,

PERSONAL AUTHOR: REED, SHERWOOD C.: CRITES, RONALD W.

DESCRIPTOR: COSTS; DESIGN; \*INDUSTRIAL WASTES: \*LAND TREATMENT: \*MUNICIPAL WASTES: \*OPERATIONS (WASTEWATER): SITE SELECTION; SOILS; \*WASTEWATER TREATMENT





DESCRIPTIVE NOTE: 427P. PRICE: \$45.00. ORDER NO.: ISBN-8-8155-0991-X

ABSTRACT: THE BASIC TECHNOLOGY FOR LAND TREATMENT OF INDUSTRIAL AND MUNICIPAL WASTES IS DEFINED IN THIS BOOK. THE PERFORMANCE OF LAND TREATMENT SYSTEMS IN REMOVING OR RETAINING WASTE CONSTITUENTS IS DOCUMENTED, AND ENVIRONMENTAL EFFECTS ARE DISCUSSED. DETAILED PROCEDURES ARE PROVIDED, FOR EXAMPLE, FOR SELECTING POTENTIAL TREATMENT SITES, FOR DETERMINING INFILTRATION RATES, AND FOR CALCULATINC AEROSOL TRANSPORT OF PATHOGENS AND NITROGEN LOSS IN STORAGE PONDS. THE BOOK COVERS A RANGE OF TOPICS FROM SMALL ONSITE SOIL ABSORPTION TO LARGE AGRICULTURAL UTILIZATION SYSTEMS, FROM MUNICIPAL WASTEWATER TO INDUSTRIAL WASTES AND SLUDGES. ALSO INCLUDED ARE COST DATA AND ENERGY CONSERVATION CONSIDERATIONS. DATA TABLES, PROCEDURES. EQUATIONS. WORK EXAMPLES, AND OVER 65 FIGURES AND ILLUSTRATIONS ENHANCE THE PRESENTATION OF THIS REFERENCE WORK.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK PIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12948

PUBLICATION DATE: 85

TITLE: CENTRALIZED WASTE TREATMENT OF INDUSTRIAL WASTEWATER.

PERSONAL AUTHOR: SALTZBERG, EDWARD R.: CUSHINE. GEORGE C.. JR.

DESCRIPTOR: \*CENTRALIZED WASTE TREATMENT: \*COSTS: \*FACILITIES: \*INDUSTRIAL WASTES: \*OPERATIONS (WASTEWATER); \*RESOURCE RECOVERY: \*WASTE DISPOSAL: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 415P. PRICE: \$45.80. ORDER NO.: ISBN-8-815-1038-1

ABSTRACT: CENTRALIZED WASTE TREATMENT (CWT) FOR INDUSTRIAL WASTEWATER IS DESCRIBED IN THIS BOOK WITH THE CWT APPROACH, INDUSTRIAL FIRMS SEND THEIR WASTES TO A COMMON PROCESSING PLANT. THE BOOK ADDRESSES THE ENGINEERING AND BUSINESS-RELATED PROBLEMS THAT ARE ENCOUNTERED BY PRIVATE CWT FIRMS, LOCAL GOVERNMENTS, AND INDUSTRY IN CREATING SUFFICIENT CWT CAPACITY TO MEET THE GROWING DEMAND FOR CWT SFRVICES THE LOW-COST AND EFFECTIVE ALTERNATIVE TO ONSITE TREATMENT, WHICH CAN BE USED IN MANY AREAS OF THE COUNTY, IS CWT. IN THE RIGHT SITUATIONS AND WITH THE PROPER KIND OF INEXPENSIVE RETROFITTING, CWT CAN DRASTICALLY REDUCE THE COST OF TREATING INDUSTRIAL WASTEWATER BECAUSE OF ECONOMIES OF SCALE. CWT ALSO HAS SEVERAL ENVIRONMENTAL ADVANTAGES: THE FACILITIES ARE OPERATED BY PROFESSIONAL WASTE HANDLERS, TRAINED TO TREAT AND MANAGE THE WASTE MORE EFFECTIVELY THAN THE GENERATING (IRMS WHICH ARE NOT PRIMARILY IN THE WASTE BUSINESS; CWT CAN DRAMATICALLY INCREASE THE POTENTIAL FOR RECOVERY OF CHEMICALS, WHICH NOT ONLY REDUCES THE FIRM'S OPERATING COSTS BUT ALSO THE BURDEN OF SLUDGE HANDLING AND DISPOSAL; AND. UNDER SOME CWT CONCEPTS, FIRMS CAN SHARE OTHER SERVICES TO FURTHER REDUCE THEIR OPERATIONAL COSTS.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPOPATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12949

PUBLICATION DATE: 84

TITLE: TRIHALOMETHANE REDUCTION IN DRINKING WATER: TECHNOLOGIES, COSTS, EFFECTIVESESS, MONITORING, COMPLIANCE. POLL. TECH. REVIEW NO 114

PERSONAL AUTHOR: CULP, GORDON, ED.

DESCRIPTOR: COMPLIANCE; COSTS; \*DRINKING WATER; MONITORING; OPERATIONS (WATER): \*TRIHALOMETHANES; TECHNOLOGY: \*WATER TREATMENT; \*PERFORMANCE EVALUATION

DESCRIPTIVE NOTE: 251P. PRICE: \$42.00. ORDER NO.: ISBN-0-B155-1002-0

ABSTRACT: THIS BOOK EVALUATES TECHNOLOGIES FOR THE EFFECTIVE REDUCTION OF TRIHALOMETHANES (THMS) IN DRINKING WATER. IT IS BASED ON STUDIES BY CULP/WESNER/CULP: TEMPLE, BARKER & SLOANE, INC.; MALCOLM PIRNIE, INC., AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY. IN ADDITION TO THE TECHNOLOGIES DESCRIBED, THEIR COSTS TREATMENT METHODS AND EFFECTIVENESS ARE EVALUATED. MONITORING COMPLIANCE WITH FEDERAL DRINKING WATER REGULATIONS ARE ALSO COVERED. THE FIRST PART OF THE BOOK CAN SERVE AS A GUIDANCE MANUAL FOR THOSE PLANNING CHANGES IN WATER TREATMENT SYSTEMS FOR THM CONTROL. IT DISCUSSES THM FORMATION, NECESSARY STEPS WHICH MUST BE FOLLOWED FOR COMPLIANCE WITH THM MAXIMUM CONTAMINANT LEVELS (MCLS), AND PROCEDURES TO ENSURE PRESERVATION OF THE FINISHED WATER. THE SECOND PART OF THE BOOK DESCRIBES BEST AVAILABLE TREATMENT METHODS AS WELL AS POTENTIALLY AVAILABLE TREATMENT METHODS. COST ANALYSES WITH RANGES OF POSSIBLE COSTS ARE INCLUDED. PART III COVERS MONITORING AND COMPLIANCE AS THEY PERTAIN TO PROMULGATED FEDERAL DRINKING WATER REGULATIONS. SUGGESTIONS AND RECOMMENDATIONS FOR IMPLEMENTATION OF THE TIMM (TOTAL THM) AMENDMENT. ISSUED IN FEBRUARY 1983. ARE PROVIDED.

AVAILABILITY: NOYES PUBLICATIONS, NOYES DATA CORPORATION, MILL RD. AT GRAND AVE.. PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ1295Ø

PUBLICATION DATE: 85

TITLE: COMBUSTION OF HAZARDOUS WASTES: SAMPLING AND ANALYSIS METHODS. POLLUTION TECHNOLOGY REVIEW NO. 117.

PERSONAL AUTHOR: HARRIS, JUDITH C.: AND OTHERS

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*COMBUSTION: \*HAZARDOUS WASTES: \*INCINERATION: \*QUALITY CONTROL; \*REGULATIONS; \*SAMPLING: \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 419P. PRICE: \$42.00. ORDER NO.: ISBN-0-B155-1019-5



ABSTRACT: SAMPLING AND ANALYSIS METHODS FOR THE MEASUREMENT OF HAZARDOUS CONSTITUENTS FOUND IN THE INFLUENT AND EFFLUENT STREAMS AT HAZARDOUS WASTE INCINERATION FACILITIES ARE DESCRIBED IN THIS BOOK. THE NEED FOR SUCH METHODS IS BASED ON PROMULGATED EPA REGULATIONS WHICH WOULD ENSURE THE HAZARDOUS WASTES IN AN ENVIRONMENTALLY COMBUSTION OF RESPONSIBLE MANNER. THE PRIMARY CRITERION UPON WHICH THE OPERATIONAL SPECIFICATIONS ARE BASED IS THE DESTRUCTION AND REMOVAL EFFICIENCY (DRE) OF THE INCINERATOR. THE DRE VALUE. DEFINED IN TERMS OF WASTE INPUT AND STACK OUTPUT LEVELS OF DESIGNATED PRINCIPAL ORGANIC HAZARDOUS CONSTITUENTS (POHCS).
MUST BE EQUAL TO OR GREATER THAN 99.99%. THE BOOK ADDRESSES THE SAMPLING AND ANALYSIS METHODS TO BE USED WHEN MEASURING THE LEVELS OF THE POHC(S) IN THE VARIOUS STREAMS OF AN INCINERATOR FACILITY (INLET WASTES, STACK GAS, PROCESS FLY ASH, AND BOTTOM ASH) OR THE PURPOSE OF CALCULATING A DRE VALUE FOR THE INCINERATOR. INCLUDED IN THE BOOK ARE CONCISE SUMMARIES STATING RECOMMENDED METHODS. TYPES OF SAMPLES AND SPECIFIC ANALYTES TO WHICH A METHOD A BRIEF DESCRIPTION OF THE METHOD AND APPLIES. INSTRUMENTATION AND OPERATING CONDITIONS.

AVAILABILITY: NOYES PUBLICATIONS. NOYES DATA CORPORATION, MILL RD. AT GRAND AVE., PARK RIDGE, NJ Ø7656

IRIS ACCESSION NUMBER: EWØ12951

PUBLICATION DATE: 82

TITLE: LABORATORY PROCEDURES FOR THE DIAGNOSIS OF INTESTINAL PARASITES.

PERSONAL AUTHOR: MELVIN, DOROTHY M.: BROOK, MARION M.

DESCRIPTOR: \*BIOLOGY: \*LABORATORY PROCEDURES; \*PARASITIES; \*MICROBIOLOGY

DESCRIPTIVE NOTE: 248P. PRICE: \$26.00

ABSTRACT: THIS MANUAL CONTAINS INFORMATION ON PRACTICAL PROCEDURES FOR PERFORMING PARASITOLOGIC EXAMINATIONS IN PUBLIC HEALTH AND MEDICAL LABORATORIES. IT INCLUDES INFORMATION ON COLLECTING AND PROCESSING SPECIMENS, METHODS OF EXAMINATION, AND ESTABLISHING RELIABLE ROUTINE LABORATORY SPECIMENS FOR DIFFERENT TYPES OF LABORATORIES.

AVAILABILITY: U.S. DEPT. OF HEALTH AND HUMAN SERVICES. PUBLIC HEALTH SERVICE, CENTERS FOR DISEASE CONTROL. LABORATORY TRAINING AND CONSULTATION DIV., ATLANTA, GA 3Ø333

IRIS ACCESSION NUMBER: EWØ12954

PUBLICATION DATE: 84

TITLE: CRITICALITY SAFETY CRITERIA FOR THE HANDLING, STORAGE AND TRANSPORTATION OF LWR FUEL OUTSIDE REACTORS.

DESCRIPTOR: \*SAFETY CRITERIA; \*HANDLING; \*HAZARDOUS MATERIALS; \*NUCLEAR MATERIALS; \*NUCLEAR REACTORS;

\*RADIOACTIVE MATERIALS: \*SAFETY: \*STANDARDS: \*STORAGE: \*TRANSPORTATION

DESCRIPTIVE NOTE: PRICE: \$15.00

ABSTRACT: THIS STANDARD PROVIDES NUCLEAR SAFETY CRITERIA FOR THE HANDLING. STORAGE. AND TRANSPORTATION OF LWP FUFL RODS AND UNITS OUTSIDE REACTOR CORES.

AVAILABILITY: AMERICAN NUCLEAR SOCIETY. 555 NORTH KENSINGTON AVE . LA GRANGE PARK. IL 60525

IRIS ACCESSION NUMBER: EWØ12955

PUBLICATION DATE: 85

TITLE: SURVEY OF EMPLOYMENT CPPORTUNITIES IN WATER RESOURCES.

DESCRIPTOR: \*EMPLOYMENT: \*EMPLOYMENT OPPORTUNITIES: \*OCCUPATIONAL INFORMATION: \*SURVEYS: \*WATER RESOURCES: \*WATER SUPPLY

DESCRIPTIVE NOTE: PRICE: \$10.00

ABSTRACT: THIS SURVEY WAS DESIGNED TO PROVIDE INFORMATION ON CONSULTING FIRMS AND MANUFACTURERS WHO ARE POTENTIAL EMPLOYERS OF INDIVIDUALS TRAINED IN ANY OF THE VARIOUS DISCIPLINES CONCERNED WITH WATER RESOURCES. THE SURVEY WAS UNDERTAKEN BECAUSE THE FIELD OF WATER RESOURCES COVERS MANY DISCIPLINES AND NO SATISFACTORY JOB PLACEMENT INFORMATION WAS AVAILABLE. INFORMATION IS PROVIDED ON A WIDE RANGE OF EMPLOYERS IN THE PRIVATE SECTOR. STATE AGENCIES. AND UNIVERSITIES WHO HAVE WATER RESOURCES RELATED INTERESTS. THE SURVEY WAS COMPILED BY THE STUDENT CHAPTER OF THE UNIVERSITY OF MINNESOTA. WITH ASSISTANCE FROM THE AWRA NATIONAL HEADQUARTERS. AS A PUBLIC SERVICE ENDEAVOR.

AVAILABILITY: AMERICAN WATER RESOURCES ASSOCIATION. 5410 GROSVENOR LANE. SUITE 220. BETHESDA. MD 20814

IRIS ACCESSION NUMBER: EWØ12956

TITLE: LESS IS BETTER.

DESCRIPTOR: \*CHEMICALS; \*LABORATORIES: \*MANAGEMENT: \*WASTE REDUCTION

DESCRIPTIVE NOTE: FREE

ABSTRACT: "LESS IS BETTER" IS A HANDBOOK THAT DISCUSSES LABORATORY MANAGEMENT AS A MEANS TO ACHIEVE WASTE REDUCTION. IT IS INTENDED FOR PERSONS RESPC IBLE FOR MANAGING HAZARDOUS LABORATORY WASTE CHEMICALS IN INDUSTRIAL AND ACADEMIC SETTINGS AND IT DESCRIBES REDUCTION TECHNIQUES INCLUDING PURCHASING CONTROL. INVENTORY CONTROL. RECLAMATION, MICROSCALE EXPERIMENTATION AND SUBSTITUTION OF NON-HAZARDOUS CHEMICALS.

AVAILABILITY: AMERICAN CHEMICAL SOCIETY, OFFICE OF FEDERAL



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REGULATORY PROGRAMS, DEPT OF GOVERNMENT RELATIONS AND SCIENCE POLICY, 1155 16TH ST., N.W., WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EWØ12957

TITLE: CHEMICAL RISK: A PRIMER.

DESCRIPTOR: \*CHEMICALS; \*HEALTH EFFECTS; \*REFERENCE MATERIALS: \*RISK ASSESSMENT: \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: FREE

ABSTRACT: "CHEMICAL RISK: A PRIMER" FOCUSES ON THE SCIENTIFIC ISSUES INVOLVED IN DETERMINING THE HEALTH RISKS ARISING FROM EXPOSURE TO CHEMICALS. IT DESCRIBES THE PROCESSES FOR AND UNCTRTAINTIES INHERENT IN ESTIMATING CHEMICAL TOXICITY, CHEMICAL EXPOSURE AND RISK. IT ALSO DISCUSSES PUBLIC PERCEPTIONS OF RISK.

AVAILABILITY: AMERICAN CHEMICAL SOCIETY, OFFICE OF FEDERAL REGULATORY PROGRAMS, DEPT. OF GOVERNMENT RELATIONS AND SCIENCE POLICY. 1155 16TH ST., N.W., WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EWØ12958

PUBLICATION DATE: 82

TITLE: REPRODUCTIVE HAZARDS OF INDUSTRIAL CHEMICALS.

PERSONAL AUTHOR: BARLOW, S.; SULLIVAN, F.

DESCRIPTOR: \*CHEMICALS: ENDOCRINOLOGY: \*HEALTH EFFECTS; \*INDUSTRIAL CHEMICALS: \*REPRODUCTION: PHARMACOLOGY; PUBLIC HEALTH: \*REFERENCE MATERIALS; TOXICOLOGY

DESCRIPTIVE NOTE: 640P. PRICE: \$75.00

ABSTRACT: THIS BOOK REVIEWS THE WORL-WIDE MEDICAL AND SCIENTIFIC LITERATURE ON REPRODUCTIVE PHARMACOLOGY, ENDOCRINOLOGY AND TOXICOLOGY IN ANIMALS AND MAN OF ABOUT 5% OF THE MOST COMMONLY USED INDUSTRIAL CHEMICALS. EACH COMPOUND IS REVIEWED FOR RELEVANT PHARMACOLOGY AND TOXICOLOGY, ENDOCRINE AND GONADAL EFFECTS, FERTILITY, PREGNANCY, MUTAGENICITY AND CARCINOGENICITY IN BOTH ANIMALS AND HUMANS. A WIDE VARIETY OF EFFECTS ARE CONSIDERED, INCLUDING SEX DIFFERENCES IN TOXICITY, PLACENTAL TRANSFER. HORMONE SECPETION. SPERM COUNTS AND MORPHOLOGY, OESTROUS CYCLES, MENSTRUAL CYCLES, TERATOGENICITY AND POSTNATAL DEVELOPMENT.

AVAILABILITY: ACADFMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBOR DRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ12959

PUBLICATION DATE: 83

TITLE: INTRODUCTION TO SAFETY IN THE CHEMICAL LABORATORY.

PERSONAL AUTHOR: FREEMAN, N., ED.; WHITEHEAD, J., ED.

DESCRIPTOR: \*ACCIDENT PREVENTION; \*CHEMICALS; \*HAZARDS; \*LABORATORIES; \*EQUIPMENT; \*FIRST AID; \*RADIATION; \*SAFETY

DESCRIPTIVE NOTE: 244P. PRICE: \$33.00

ABSTRACT: A COMPREHENSIVE AND STRAIGHTFORWARD APPROACH TO HAZARDS IN THE CHEMICAL LABORATORY, THIS GENERAL WORK EXPLAINS THE SAFETY PRECAUTIONS THAT CAN PREVENT SERIOUS ACCIDENTS. THE AUTHORS HAVE COMPILED INFORMATION FROM A VARIETY OF PUBLICATIONS THAT HAVE IMPACT ON LABORATORY PERSONNEL. CHAPTERS ON ORGANIZING THE LAB FOR SAFETY, OUTLINING THE DANGERS OF LAB EQUIPMENT, COMMONLY USED CHEMICALS, COMPRESSED GASES, AND ELECTROMAGNETIC RADIATION, INCLUDING FIRST AID INSTRUCTIONS MAKE THIS A VALUABLE REFERENCE BOOK FOR EVERYONE IN THE CHEMICAL LAB.

AVAILABILITY: ACADEMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBOR TRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ1296Ø

PUBLICATION DATE: 82

TITLE: AIR POLLUTION: PHYSIOLOGICAL EFFECTS.

PERSONAL AUTHOR: MCGRATH, J., ED.; BARNES, C., ED.

DESCRIPTOR: \*AIR POLLUTION; \*ENVIRONMENTAL EFFECTS; \*HEALTH; \*PHYSIOLOGY; \*PUBLIC HEALTH; \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 368P. PRICE: \$47.50

ABSTRACT: THIS VOLUME REVIEWS THE PHYSIOLOGICAL EFFECTS ON HUMANS THAT MAY BE ASSOCIATED WITH GASEOUS AND PARTICULAR POLLUTION. INVESTIGATORS FROM INDUSTRY, GOVERNMENT, AND ACADEME EMPHASIZE MECHANISMS AND SITES OF INJURY AND EXPLORE THE EFFECTS OF SEVERAL ENERGY-RELATED AND OCCUPATIONALLY ENCOUNTERED POLLUTANTS. THREE MAJOK SECTIONS COVER BIOCHEMICAL CHANGES, PHYSIOLOGICAL EFFECTS OF PARTICULAR POLLUTION. AND PHYSIOLOGICAL RESPONSE TO POTENTIALLY TOXIC GASES.

AVAILABILITY: ACADEMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBOR DRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ12961

PUBLICATION DATE: 82

TITLE: SAFE USE OF SOLVENTS.

PERSONAL AUTHOR: COLLINGS, A., ED.; LUXON, S., ED.

DESCRIPTOR: ACCIDENT PREVENTION; \*CHEMICAL PROPERTIES; \*BIOLOGICAL PROPERTIES; HANDLING; \*PHYSICAL PROPERTIES; \*REFERENCE MANUALS; SAFETY; \*SOLVENTS

DESCRIPTIVE NOTE: 500P. PRICE: \$49.00

ABSTRACT: WIDE USE OF SOLVENTS HAS LED GOVERNMENT, INDUSTRY, AND TRADE UNIONS TO TAKE AN ACTIVE INTEREST IN HOW SOLVENTS ARE MANUFACTURED, STORED, TRANSPORTED, USED, AND DISPOSED OF SAFELY. THIS VOLUME DEALS SPECIFICALLY WITH THE PHYSICAL, CHEMICAL, AND BIOLOGICAL PROPERTIES OF SOLVENTS AND AS SUCH IS A USEFUL GUIDE FOR INDUSTRIAL MANUFACTURERS, OCCUPATIONAL HEALTH OFFICERS, AND ALL THOSE WHO HANDLE SOLVENTS.

AVAILABILITY: ACADEMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEAHARBOR DRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ12963

PUBLICATION DATE: 83

TITLE: ACCIDENTAL EXPOSURE TO DIOXINS.

PERSONAL AUTHOR: COULSTON, F., ED.; POCCHIARI, F., ED.

DESCRIPTOR: \*CHEMICALS; \*DIOXINS; \*ENVIRONMENT; \*ENVIRONMENTAL IMPACT: \*HEALTH EFFECTS; \*POLLUTION CONTROL; \*PUBLIC HEALTH: \*REPRODUCTION: \*TRANSPORT

DESCRIPTIVE NOTE: 304P. PRICE: \$29.50

ABSTRACT: THE PURPOSE OF THIS VOLUME IS TO DOCUMENT THE NATURE OF EXPOSURE TO DIOXIN IN PLANTS, ANIMALS, AND MAN, TO DISCUSS IN GREAT DETAIL PAST RESPONSES TO THIS TYPE OF ACCIDENT, AND TO ILLUSTRATE HOW TO MANAGE ANY OTHER ACCIDENT OF THIS KIND IN THE FUTURE. QUESTIONS AS TO THE EFFECT OF DIOXIN ON THE REPRODUCTIVE PROCESS ARE DISCUSSED AT SOME LENGTH, IN ADDITION TO CONCLUSIONS MADE FROM STUDIES OF THE WATER, AIR, FOOD, A'D EARTH ITSELF.

AVAILABILITY: ACADEMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBOR DRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ12964

PUBLICATION DATE: 83

TITLE: CHEMICAL TOXICOLOGY AND CLINICAL CHEMISTRY OF METALS.

PERSONAL AUTHOR: BROWN, S., ED.: SAVORY, J., ED.

DESCRIFTOR: \*CHEMICALS: \*METALS: \*SYMPOSIA: \*TOXICOLOGY

DESCRI . IVE NOTE: 432P, PRICE: \$38.50

ABSTRACT: THIS BOOK CONTAINS THE 15 PLENARY LECTURES PLUS 48 CONTRIBUTED PAPERS FROM A RECENT INTERNATIONAL SYMPOSIUM. THE TOPICS FALL INTO 4 CATEGORIES: ANALYSIS AND QUALITY ASSURANCE; OCCUPATIONAL AND ENVIRONMENTAL EXPOSURES; SPECIATION AND INTERACTIONS; AND CLINICAL AND EXPERIMENTAL STUDIES. THE TOXICITIES OF SEVERAL WELL-KNOWN TOXINS SUCH AS LEAD, MERCURY, CADMIUM AND NICKEL ARE DISCUSSED. ALSO INCLUDED ARE LESSER KNOWN TOXIC METALS SUCH AS ALUMINUM, MANGANESE, SELENIUM, CHROMIUM AND URAN 1UM.

AVAILABILITY: ACADEMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBOR DRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ12965

PUBLICATION DATE: 84

TITLE. PRINCIPLES OF WATER QUALITY.

PERSONAL AUTHOR: WAITE, T., ED.

DESCRIPTOR: \*CONTAMINANTS; \*ENGINEERING; \*INSTRUCTIONAL MATERIALS: \*MANAGEMENT; \*POSTSECONDARY EDUCATION; \*STANDARDS; \*WASTEWATER TREATMENT; \*WATER QUALITY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 304P. PRICE: \$45.00

ABSTRACT: THE TREATMENT METHODS EMPLOYED IN PURITYING WATER AND WASTEWATER ARE ENGINEERING MODELS BASED ON NATURAL PHENOMENA; THEREFORE, AN UNDERSTANDING OF THESE PROCESSES IS REQUIRED. THIS TEXT CLARIFIES FOR THE READER WHICH CONTAMINANTS ARE ACTUAL POLLUTANTS AND WHICH ARE INERT ADDITIVES. IN ADDITION TO DESCRIBING THE CHEMICAL AND MICROBIOLOGICAL PROCESSES OPERATIVE ON CONSTITUENTS IN WATER, THIS VOLUME INTRODUCES ENGINEERING APPROACHES FOR WATER QUALITY IMPROVEMENT OTHER THAN SEWAGE TREATMENT, TOXIC METALS AS FACTORS IN WATER QUALITY, AND WATER QUALITY STANDARDS AND MANAGEMENT APPROACHES.

AVAILABILITY: ACADEMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBOR DRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ12966

PUBLICATION DATE: 83

TITLE: ECOTOXICOLOGY: THE STUDY OF POLLUTANTS IN ECOSYSTEMS.

PERSONAL AUTHOR: MORIARTY, F.

DESCRIPTOR: \*ECOTOXICOLOGY; \*ECOSYSTEMS; \*ENVIRONMENTAL EFFECTS; \*MONITORING; \*POLLUTION DYNAMICS; \*RESEARCH; \*TOXICOLOGY

DESCRIPTIVE NOTE: 240P. PRICE: \$36.00

ABSTRACT: THIS BOOK IS A SERIES OF CLOSELY-LINKED ESSAYS WHICH APPRAISE THE CURRENT KNOWLEDGE OF ECOTOXICOLOGY USING RESEARCH FROM RELVANT STUDIES (INCLUDES 74 FIGURES AND 30 TABLES IN THE TEXT). ESSENTIAL ASPECTS OF POLLUTION DYNAMICS, COMMUNITIES AND GENE POOLS ARE DISCUSSED WITH ATTENTION THEN FOCUSED ON THE PROBLEMS OF SUBLETHAL EFFECTS. REMAINING CHAPTERS COVER THE PREDICTION OF EFFECTS AND MONITORING.

AVAILABILITY: ACADEMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBER DRIVE, ORLANDO. FL 32821

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IRIS ACCESSION NUMBER: EWØ12967 PUBLICATION DATE: 84

TITLE: EVALUATION OF THE SEDRI/IEOS RURAL WATER AND SANITATION PROGRAM IN ECUADOR.

PERSONAL AUTHOR: DONALDSON, DAVID; LAUREA, OSCAR

DESCRIPTOR: \*ASSESSMENT; \*ECUADOR; \*HEALTH; \*PLANNING; \*PROGRAM DEVELOPMENT; \*PUBLIC PARTICIPATION; \*PROGRAM EVALUATION; \*SANITATION; \*WATER SUPPLY; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 136P.

ABSTRACT: THIS REPORT ASSESSES THE INTEGRATED RURAL HEALTH DELIVERY SYSTEM (IRDHS), A PROJECT AGREED UPON BY THE GOVERNMENT OF ECUADOR AND USAID IN LATE 1981. WASH EXPERTS EVALUATED THE PROJECT ON THE FOLLOWING AREAS; OUTPUTS IN TERMS OF WATER SYSTEMS AND LATRINES, STRENGTHENING OF INSTITUTIONAL SYSTEM, INSTITUTIONAL ARRANGEMENTS, COMMUNITY PARTICIPATION, USER EDUCATION ACTIVITIES AND COMMODITY INPUTS. ALSO INCLUDED ARE SEVERAL RECOMMENDATIONS AIMED TOWARDS INCREASING COMMUNITY PARTICIPATION, EXPANDING THE ROLE OF PARA-PROFESSIONALS, AND LOWERING OF PROGRAM COSTS.

AVAILABILITY: WATER AND SANITATION FOR HEALTH (WASH) PROJECT, COORDINATION AND INFORMATION CENTER, 1611 N KENT ST., RM 1882, ARLINGTON, VA 22289

IRIS ACCESSION NUMBER: EWØ12968

TITLE: GIARDIA LAMBLIA IN WATER SUPPLIES-DETECTION. OCCURRENCE AND REMOVAL.

DESCRIPTOR: \*DETECTION; \*DRINKING WATER; \*GIARDIA LAMBLIA; LABORATORY PROCEDURES; MICROBIOLOGY; MONITORING; \*OPERATIONS (WATER); \*PUBLIC HEALTH; SAMPLING; \*WATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: PRICE: \$22.50 MEMBERS; \$28.50 NONMEMBERS

ABSTRACT: THIS AWWA HANDBOOK PROVIDES INFORMATION ON HOW GIARDIA OCCURS, HOW TO DETECT THE ORGANISM, AND METHODS FOR REMOVAL OF THE ORGANISM.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, COMPUTER SERVICES DEPT., 666 WEST QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EWØ12969

PUBLICATION DATE: 85

TITLE: RECOVERY, RECYCLE AND REUSE OF INDUSTRIAL WASTES.

PERSONAL AUTHOR: NOLL, KENNETH E.; AND OTHERS

DESCRIPTOR: \*BIOLOGICAL PROCESSES: \*CHEMICAL PROCESSES; \*INDUS:RIAL WASTES: \*PHYSICAL PROCESSES: RECYCLING: \*RESOURCE RECOVERY: TECHNOLOGY: WASTE DISPOSAL: \*WASTE

TREATMENT
DESCRIPTIVE NOTE: 196P. PRICE: \$24.95

ABSTRACT: THIS PUBLICATION CONSIDERS CONCEPTS, ADVANTAGES, AND DISADVANTAGES OF RECOVERY, RECYCLE, AND REUSE. CHEMICAL, PHYSICAL, AND BIOLOGICAL PROCESSES ARE REVIEWED. DETAILED INFORMATION IS PROVIDED ON POTENTIAL APPLICATIONS AND CURRENT LIMITATIONS OF THREE APPLICATIONS.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. BOX 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ1297Ø

PUBLICATION DATE: JUL 85

TITLE: HANDBOOK OF HAZARD COMMUNICATION AND OSHA REQUIREMENTS.

PERSONAL AUTHOR: LOWRY, GEORGE G.; LOWRY, ROBERT C.

DESCRIPTOR: \*GUIDES; \*HAZARDOUS MATERIALS; \*HAZARD COMMUNICATION: \*OSHA; \*REGULATIONS; SAFETY; \*STANDARDS; \*TRAINING

DESCRIPTIVE NOTE: 148P. PRICE: \$34.95

ABSTRACT: SOME 70-80000 HAZARDOUS MATERIALS ARE IN VARIOUS WORKPLACES ACROSS THE COUNTRY REGULATED BY THE OSHA HAZARD COMMUNICATION STANDARDS. THIS BOOK PROVIDES INFORMATION ON IDENTIFYING HAZARDS, CHARACTERIZATION OF HAZARDS, LABEL DESIGN AND COMMENT, MATERIAL SAFETY DATA SHEET TO USE, WRITTEN HAZARD COMMUNICATION PROGRAM, EMPLOYEE TRAINING, LEGAL RESPONSIBILITIES, AND CONSEQUENCES.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. BOX 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12972

PUBLICATION DATE: 85

TITLE: MANAGEMENT OF INDUSTRIAL POLLUTAMTS BY ANAEROBIC PROCESSES.

PERSONAL AUTHOR: OBAYASHI, ALAN W.: GORGAN, JOSEPH M.

DESCRIPTOR: \*ANAEROBIC TREATMENT: \*BIODEGRADATION; \*INDUSTRIAL POLLUTANTS; \*INDUSTRIAL WASTES; \*MICROBIAL SULFUR PECOVERY; \*MANAGEMENT; \*TECHNOLOGY; \*TOXICITY; WASTE MANAGEMENT

DESCRIPTIVE NOTE: 193P. PRICE: \$24.95

ABSTRACT: THIS BOOK BRINGS TOGETHER DETAILED INFORMATION ON CURRENT AND POTENTIAL APPLICATIONS OF ANAEROBIC PROCESSES IN INDUSTRIAL WASTE MANAGEMENT.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN

STREET, P.O. BOX 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12973

PUBLICATION DATE: 84

TITLE: NOT IN OUR BACKYARDS--COMMUNITY ACTION FOR HEALTH AND THE ENVIRONMENT.

PERSONAL AUTHOR: FREUDENBERG. NICHOLAS

DESCRIPTOR: \*COMMUNITY ACTION: GOVERNMENT: \*ENVIRONMENT; \*HEALTH; INDUSTRY: \*LOCAL ACTION: ORGANIZATIONS: \*POLITICS: \*POLLUTION; \*POLLUTION CONTROL: \*PUBLIC HEALTH; \*REGULATIONS: \*PUBLIC PARTICIPATION: WORLD PROBLEMS

DESCRIPTIVE NOTE: PRICE: \$10.00

ABSTRACT: TH'S BOOK PRESENTS PROBLEMS AND CONCERNS REGARDING THE GROWING NUMBER OF NEW CHEMICALS, THEIR PRODUCTS INTRODUCED INTO THE ENVIRONMENT, AND THE POSSIBLE ENVIRONMENTAL AND HEALTH EFFECTS ON THE LOCAL POPULATION. THE BOOK IS WRITTEN FROM / ENVIRONMENTAL ACTIVIST'S POINT OF VIEW. THE BOOK IS DIVIDED INTO 10 CHAPTERS EACH PROVIDING CASE HISTORIES IN THE BATTLE AGAINST THE INTRODUCTION OF TOXIC SUBSTANCES OR HAZARDOUS MATERIALS INTO LOCAL COMMUNITIES AND THE SUCCESSES AND/OR FAILURES IN EACH OF THESE CASES. THE VARIOUS CHAPTERS DEAL WITH THE EFFECT OF CORPORATE POLICY ON THE ENVIRONMENT, THE HEALTH EFFECTS ON LOCAL POPULATIONS, THE LIMITATIONS OF SCIENCE AND ENVIRONMENTAL HEALTH RESEARCH, THE EXTENT TO WHICH ENVIRONMENTAL REGULATIONS PROTECT THE ENVIRONMENT AND THE PEOPLE IN IT, AND HOW LOCAL POPULATION GROUPS ARE ORGANIZING AND DEVELOPING A STRATEGY BOTH LOCALLY AND NATIONALLY TO COPE WITH THESE ENVIRONMENTAL HAZARDS.

AVAILABILITY: MONTHLY REVIEW PRESS, NEW YORK, NY

IRIS ACCESSION WIMBER: EWØ12974

TITLE: FUTURE OF WATER REUSE: PROCEEDINGS OF WATER REUSE SYMPOSIUM I.I.

DESCRIPTOR: \*CONFERENCE PROCEEDINGS: AGRICULTURE; HEALTH EFFECTS; INDUSTRIAL REUSE; MONITORING; RESEARCH; \*RECYCLING; RESOURCE RECOVERY; SILVICULTURE, \*WATE\ REUSE: \*WATER TREATMENT; \*WATER RESOURCES

DESCRIPTIVE NOTE: PRICE: \$50.00

ABSING THIS DOCUMENT PRESENTS CURRENT STATE-OF-THE-ART INFORMS ION ON WATER REUSE. THE THREE VOLUME SET INCLUDES NEARLY 150 INDIVIDUAL PAPERS PRESENTED ON VARIOUS SUBJECTS RELATED TO THE TOPIC.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 W. QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EWØ12975
TITLE: THE ACTIVATED SLUDGE PROCESS: FUNDAMENTALS OF OPERATION.

PERSONAL AUTHOR: JUNKINS, RANDY: AND OTHERS

DESCRIPTUR: \*ACTIVATED SLUDGE PROCESS; \*INSTRUCTIONAL MATERIALS: \*POSTSECONDARY EDUCATION; \*OPERATIONS (WASTEWATER); \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PRICE: \$30.00

ABSTRACT: THIS BOOK CAN BE USED BY OPERATOR TRAINEES AND PROCESS MANAGERS ALIKE. THE BOOK CONSIDERS THE ACTIVATED SLUDGE PROC SS WITH ACTUAL EXAMPLES OF SAMPLE CALCULATIONS.

AVAILABILITY: RICHARD WAKS, BUTTERWORTH PUBLISHEPS, 80 MONTDALE AVE., STONEHAM, MA 02180

IRIS ACCESSION NUMBER: EWØ12976

TITLE: CHLORAMINATION FOR THM CONTROL: PRINCIPLES AND PRACTICES.

DESCRIPTOR: \*CHLORAMINES; \*DRINKING WATER: CHEMISTRY; \*DISINFECTION; \*HEALTH EFFECTS; \*OPERATIONS (WATER); REGULATIONS: \*WATER TREATMENT

DESCRIPTIVE NOTE: PRICE: \$12.00 MEMBERS; \$15.00 NONMEMBERS

ABSTRACT: THIS PR CEEDINGS FROM AWWA'S 1985 ANNUAL CONFERENCE FOCUSES ON THE ISSUE OF CHLORAMINES FOR DISINFECTION AND ON THE FACTS SURROUNDING ITS USE. SECTIONS ARE INCLUDED ON THE FOLLOWING TOPICS: (1) CHLORAMINE CHEMISTRY AND RESIDUAL MEASUREMENT: (2) HEALTH EFFECTS OF CHLORAMINES; (3) REGULATORY ASPECTS OF DISINFECTION: (4) REGULATORY ASPECTS OF CHLORAMINATION: THE STATE PERSPECT SET OF CHLORAMINATION: THE STATE PERSPECT SET OF CHLORAMINATION: (6) EXPERIENCES WITH CHLORAMINE TREATMENT IN SAN DIEGO; (7) RECENT EXPERIENCES WITH CHLORAMINES IN MIAMI; AND (8) RECENT EXPERIENCES WITH CHLORAMINES IN THE FAIRFAX COUNTY (VIRGINIA) WATER AUTHOR ITY'S SYSTEM.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 W. QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EWØ12978

PUBLICATION DATE: SEP 84

TITLE: HELPING GHANA SEARCH FOR WATER. WASH FI LD REPORT NO. 132.

PERSONAL AUTHOR: PREBLE, RALPH E.

DESCRIPTOR: \*GHANA; \*NEEDS; \*PIANNING; \*RECOMMENDATIONS; \*WATER RESOURCES, \*WATER SUPPLY

ABSTRACT: FINDINGS AND RECOMMENDATIONS OF A FOUR-WEEK WASH

CONSULTANCY TO GHANA IN JULY 1984 ARE SUMMARIZED IN THIS REPORT. SUGGESTIONS INCLUDE SHORT-TERM EMERGENCY ASSISTANCE, THE PROVISION OF AN INFORMATION CENTER, TECHNICAL ASSISTANCE, EQUIPMENT, SUPPLIES, BACK-UP ASSISTANCE, SIX WATER TANK TRUCKS AND MAINTENANCE OF EXISTING FACILITIES LIKE HANDPUMPS. ALSO RECOMMENDED BY THE PAPER ARE LONG-RANGE PROGRAMS IN WATER SUPPLY IN SELECTED REGIONS OF THE COUNTRY.

1VAILABILITY: WATER AND SANITATION FOR HEALTH (WASH) PROJECT, COORDINATION AND INFORMATION CENTER, 1611 N. KENT ST., ROOM 1882, ARLINGTON, VA 22289

IRIS ACCESSION "UMBER: EWØ12979

PUBLICATION DATE: 84

TITLE: HOUSEHOLD HAZARDOUS WASTE: SOLVING THE DISPOSAL DILEMMA.

PERSONAL AUTHOR: PURIN, GINA; AND OTHERS

DESCRIPTOR: \*GUIDES; \*HAZARDOUS MATERIALS; \*HOUSEHOLD WASTES: \*INDUSTRIAL MATERIALS; \*POLLUTION CONTROL; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 375P. PRICE: \$10.00

ABSTRACT: THIS IS A THREE-PART PACKAGE DESIGNED TO HELP COMMUNITIES PROMOTE THE SAFE USE AND DISPOSAL OF HOUSEHOLD TOXICS AND ENCOURAGE USE OF NONTOXIC SUBSTITUTES. THE PACKAGE CONSISTS OF A GUIDE TO COMMUNITY COORDINATED DISPOSAL OF HOUSEHOLD HAZARDOUS WASTE, A FIELD TESTED CURRICULUM WITH VARIATIONS TO SUIT FOUR AGE GROUPS, AND AN EDUCATIONAL POSTER.

AVAILABILITY: GOLDEN EMPIRE HEALTH PLANNING CENTER. 2188 21ST STREET. SACRAMENTO, CA 95818

IRIS ACCESSION NUMBER: EWØ1298Ø

TITLE: GROUNDWATER TREATMENT TECHNOLOGY.

PERSONAL AUTHOR: NYER, EVAN K.

DESCRIPTOR: CHEMICALS; \*CLEANUP; \*CONTAMINATION; \*GROUNDWATER; COSTS; POLLUTION CONTROL: \*TREATMENT SYSTEMS; WATER SUPPLY; \*WATER RESOURCES; \*WATER OUALITY; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 238P. PRICE: \$32.50

ABSTRACT: THIS VOLUME EXAMINES CURRENT PROCEDURES AND TECHNOLOGY IN GROUNDWATER CLEANUP. SHOWING HOW GROUNDWATER TREATMENT SYSTEMS DIFFER FROM THOSE USED IN DECONTAMINATING OTHER TYPES OF POLLUTED WATER, IT DELINEATES THE VARIOUS ASPECTS OF GROUNDWATER CLEANUPS AND PRESENTS METHODS THAT OFFER THE BEST ECONOMY AND PERMANENCY.

AVAILABILITY: VAN NOSTRAND REINHOLD, MAIL ORDER SERVICE, 7625 EMPIRE DRIVE, FLORENCE, KY 41042

IRIS ACCESSION NUMBER: EWØ12981

TITLE: ENVIRONMENTAL LAW HANDBOOK, 8TH EDITION.

DESCRIPTOR: AIR POLLUTION; ENVIRONMENTAL IMPACT STATEMENTS; \*ENVIRONMENTAL LAW; \*ENVIRONMENT; \*GOVERNMENT; \*FEDERAL ROLE; \*HANDBOOKS; HAZARDOUS WASTES; \*LAW; LAND USE; \*LEGISLATION; OSHA; NOISE; PESTICIDES; POLLUTION CONTROL; \*REGULATIONS; RCRA; WATER POLLUTION; SUPERFUND; SOLID WASTES; TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 544P. PRICE: \$49.50

ABSTRACT: THIS REMARKABLY USEFUL HANDBOOK PROVIDES PRACTICAL AND CURRENT INFORMATION ON THE MAJOR ENVIRONMENTAL AREAS WITH A CHAPTER EACH ON AIR POLLUTION, LAND USE, PESTICIDES, TOXIC SUBSTANCES, NOISE, HAZARDOUS WASTES (RCRA), OSHA, SUPERFUND, SAFE DRINKING WATER ACT, MARINE SANCTUARIES ACT, AND NEPA, PLUS A COMPREHENSIVE REVIEW OF THE FUNDAMENTALS BASIC TO ENVIRONMENTAL LAW: ENVIRONMENTAL TORTS, CONSTITUTIONAL LAW, EVIDENCE, DEFENSES, WHO CAN SUE, AND CIVIL AND CRIMINAL LIAFILITY.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., P.O. BOX 1096, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EWØ12982

PUBLICATION DATE: 85

TITLE: ENVIRONMENTAL STATUTES, 1985 EDITION.

DESCRIPTOR: AIR POLLUTION CONTROL; \*ENVIRONMENT; \*ENVIRONMENTAL PROTECTION; "LEGISLATION; NOISE POLLUTION CONTROL; \*REGULATIONS; RESOURCE RECOVERY; SAFE DRINKING WATER ACT; SAFETY; \*STATUTES; TOXIC SUBSTANCES; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 760P. PRICE: \$26.95

ABSTRACT: INCLUDED ARE ALL MAJOR ENVIRONMENTAL LAWS. THE COMPLETE TEXT OF EACH STATUTE AS CURRENTLY AMENDED IS INCLUDED WITH A DETAILED TABLE OF CONTENTS FOR QUICK REFERRAL. CONTENTS: CLEAN AIR ACT; FEDERAL WATER POLLUTION CONTROL ACT: NATIONAL ENVIRONMENTAL POLICY ACT; NOISE CONTROL ACT; FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT; MARINE SANCTUARIES ACT; OCCUPATIONAL SAFETY AND HEALTH ACT; RESOURCE CONSERVATION AND RECOVERY ACT INCLUDING THE NEW HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984 WHICH INCLUDES THE NEW LEAKING UNDERGROUND STORAGE TANKS LAWS; SAFE DRINKING WATER ACT; TOXIC SUBSTANCES CONTROL ACT; SUPERFUND; AND THE USED OIL RECYCLING ACT OF 1980.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., P.O. BOX 1896, ROCKVILLE, MD 28858

IRIS ACCESSION NUMBER: EWØ12985

TITLE: OZONE IN WATER TREATMENT-APÍLICATIONS, OPERATIONS, AND TECHNOLOGY.

DESCRIPTOR: DESIGN; \*DISINFECTION; FACILITIES; \*OPERATIONS (WATER); \*OZONE; RESEARCH; TECHNOLOGY; \*WATER TREATMENT: \*WATER QUALITY

DESCRIPTIVE NOTE: PRICE: \$23.00 MEMBERS; \$29.00 NONMEMBERS

ABSTRACT: OZONE USAGE DESIGN AND OPERATION OF AN OZONE PLANT AND THE LATEST FACTS ON OZONE RESEARCH AND TECHNOLOGY ARE DISCUSSED. 20 ARTICLES ARE INCLUDED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION. 6666 WEST QUINCY AVE., DENVER, CO 80235

IRJS ACCESSION NUMBER: EWØ14986

TITLE: NON-SPECIFIC ORGANIC ANALYSIS FOR WATER TREATMENT PROCESS CONTROL AND MONITORING.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; CHEMICALS: EVALUATION; LABORATORY PROCEDURES; MONITORING; \*OPERATIONS (WATER); \*OPERATIONS (WASTEWATER); \*NON-SPECIFIC ANALYSIS; \*ORGANIC CHEMICALS; \*PROCESS CONTROL; \*WATER QUALITY: \*WASTEWATER TREATMENT; \*WATER TREATMENT

DESCRIPTIVE NOTE: PRICE: \$15.00 MEMBERS; \$19.00 NONMEMBERS

ABSTRACT: THIS PUBLICATION IS A COLLECTION OF PAPERS ON NON-SPECIFIC ORGANIC ANALYSIS PRESENTED AT THE 1985 AWWA ANNUAL CONFERENCE IN WASHINGTON, D.C. NON-SPECIFIC ANALYSIS IS A VALUABLE TOOL THAT CAN BE USED TO ASSESS WATER QUALITY. AND TO MONITOR UNIT OPERATIONS, WATER RECLAMATION PLANTS, AND WASTEWATER TREATMENT.

AVAILABILITY: AMTRICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EWØ12987

TITLE: FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTIC! E ACT: COMPLIANCE/ENFORCEMENT GUIDANCE MANUAL.

DESCRIPTOR: \*FUNGICIDES; \*INSECTICIDES; \*COMPLIANCE; \*ENFORCEMENT: \*MANUALS: \*REGULATIONS: \*RODENTICIDES: \*USEPA

DESCRIPTIVE NOTE: 512P. PRICE: \$64.00

ABSTRACT: PREPARED BY EPA FOR USE WITHIN THE AGENCY, THE FIFRA COMPLIANCE/ENFORCEMENT MANUAL SHOWS COMPLIANCE MONITC ING PROCEDURES. HOW EPA DETERMINES CIVIL AND CRIMINAL VIOLATIONS, HOW PENAL Y ASSESSMENTS ARE MADE. PROCEDURES FOR FILING ACTION, PREPARING TO BECOME A CREDIBLE WITNESS. MONITORING SETTLEMENT AGREEMENTS, DOCUMENTING EVIDENCE. AND MORE. AN OVERVIEW OF FIRA, A CLOSSARY, AND AN APPENDIX FULL OF PRACTICAL EXHIBITS SUPPLEMENT THE COMPREHENSIVE COMPLIANCE/ENFORCEMENT GUIDE.

AVAILABILITY: GOVERNMENT INSTITUTES, P.C. BOX 1096, ROCKVILLE. MD 20850

IRIS ACCESSION NUMBER: EWØ12988

TITLE: ENVIRONMENTAL GLOSSARY, 3RD EDITION.

DESCRIPTOR: \*ABBREVIATIONS; \*DEFINITIONS: \*ENVIRONMENT; \*FEDERAL STATUTES: \*GLOSSARIES; \*POLLUTION CONTROL; \*REGULATIONS: \*TERMINOLOGY

DESCRIPTIVE NOTE: 336P. PRICE: \$38.00

ABSTRACT: THE GLOSSARY DEFINES AND STANDARDIZES MORE THAN 3200 TERMS. ABBREVIATIONS AND ACRONYMS FROM ENVIRONMENTAL STATUTES AND THE U.S. CODE OF FEDERAL REGULATIONS. AUTHORITATIVE DEFINITIONS ARE COMPILED DIRECTLY FROM OFFICIAL LEGAL TERMS FOUND IN ENVIRONMENTAL LEGISLATION AND REGULATIONS. THE THIRD EDITION OF THE GLOSSARY REPRESENTS AN APPROXIMATE 10% EXPANSION OVER THE SECOND ADDITION. MORE THAN 250 TERMS HAVE BEEN ADDED AND MORE THAN 130 REVISIONS HAVE BEEN INCORPORATED INTO THE THIRD EDITION.

AVAILABILITY: GOVERNMENT INSTITUTES. INC.. P.O. BOX 1096, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EWE12989

TITLE: CLEAN AIR ACT COMPLIANCE/ENFORCEMENT GUIDANCE MANUAL.

DESCRIPTOR: \*AIR POLLUTION CONTROL; \*CLEAP AIR ACT; \*COMPLIANCE: \*ENFORCEMENT; INSPECTION; \*MANUALS; MONITORING; REGULATIONS; USEPA

DESCRIFTIVE NOTE. 288P. PRICE: \$48.30

ABSTRACT: THIS MANUAL REVIEWS THE CLEAN AIR ACT AND ITS HISTORY; COMPLIANCE AND MONITORING PROCEDURES: INSPECTIONS: EVIDENCE DOCUMENTATION; AND PENALTIES. THIS MANUAL IS A USEFUL REFERENCE FOR FACILITIES MANAGERS WHOSE EMMISSIONS ARE REGULATED BY THE CLEAN AIR ACT.

AVAILABILITY: GOVERNMENT INSTITUTES, INC. P.O. BOX 1096, ROCKVILLE. MD 20850

IRIS ACCESSION NUMBER: EWØ1299Ø

TITLE: TSCA COMPLIANCE/ENFORCEMENT GUIDANCE MANUAL.

DESCRIPTOR: \*COMPLIANCE; \*ENFORCEMENT: \*MANUALS; \*MONITORING: \*REFERENCE MANUALS: \*TSCA: \*TOXIC SUBSTANCES

DESCRIPTIVE NOTF: 500P. PRICE: \$48.00

ABSTRACT: THIS MANUAL PRESENTS PROCEDURAL REQUIREMENTS NECESSARY FOR ENSURING COMPLIANCE AND HOW EPA PREPARES ENFORCEMENT CASES UNDER TSCA. THE PROCESSES OF





ADMINISTRATIVE CASE DEVELOPMENT AND JUDICIAL PROCEEDINGS ARE COVERED IN GREAT DETAIL AND INCLUDE: ANALYZING EVIDENCE COLLECTED DURING A COMPLIANCE INSPECTION; ISSUING AN ENFORCEMENT ACTION; PRESENTING EVIDENCE IN AN ADJUDICATORY HEARING; AND MONITORING COMPLIANCE WITH CONSENT DECREES. THERE ARE NUMEROUS REFERENCES AND SAMPLE FORMS THROUGHOUT THE TEXT.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., P.O. BOX 1096, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EWØ12991

TITLE: RCRA COMPLIANCE/ENFORCEMENT GUIDANCE MANUAL.

DESCRIPTOR: \*COMPLIANCE; \*ENFORCEMENT; HAZARDOUS WASTES; INSPECTION; \*MANUALS: MONITORING; POLLUTION CONTROL; \*RCRA; REGULATIONS

DESCRIPTIVE NOTE: 392P. PRICE: \$44.00

ABSTRACT: THIS MANUAL DETAILS COMPLIANCE AND ENFORCEMENT PROCEDURAL REQUIREMENTS NECESSARY TO MEET EPA HAZARDOUS WASTES REGULATIONS. A RCRA OVERVIEW; REVIEW OF MONITORING PROCEDURES INCLUDING INSPECTIONS, WARRANTS, AND SUBPOENAS; A CHAPTER ON EVIDENCE DOCUMENTATION; CIVIL PENALTY PROCEEDINGS; CIVIL AND CRIMINAL ACTIONS: AND SETTLEMENT AGREEMENTS ARE EXAMINED IN DETAIL IN THE COMPLIANCE/ENFORCEMENT GUIDE. NUMEROUS SAMPLE EXHIBITS SUPPORT THE TEXT.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., P.O. BOX 1096, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EWØ12992

PUBLICATION DATE: 85

TITLE: MANAGEMENT OF TOXIC AND HAZARDOUS WASTES.

PERSONAL AUTHOR: BHATT, HARASIDDHIPRASAD G.: AND OTHERS

DESCRIPTOR: CONFERENCE PROCEEDINGS; CONTAMINATION; \*GROUNDWATER; \*HAZARDOUS WASTES; \*LAND DISPOSAL; \*MANAGEMENT; POLLUTION CONTROL; RECYCLING; \*REGULATIONS; \*RISK ASSESSMENT: \*TOXIC SUBSTANCES; \*WASTE TREATMENT

DESCRIPTIVE NOTE: 418P. PRICE: \$49.95

ABSTRACT: THIS PUBLICATION COVERS: (1) TREATMENT, DISPOSAL AND STORAGE OF TOXIC AND HAZARDOUS WASTES: (2) GROUNDWATER CONTAMINATION AND CONTROL; (3) LEGAL AND REGULATORY ASPECTS: AND (4) RISK ANALYSIS. CASE STUDIES SHOW HOW SPECIFIC PROBLEMS WERE SOLVED.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12993

PUBLICATION DATE: 85

TITLE: SAFE DRINKING WATER: THE IMPACT OF CHEMICALS ON A LIMITED RESOURCE.

PERSONAL AUTHOR: RICE, RIP G., ED.

DESCRIPTOR: ANALYTICAL TECHNIQUES; \*CHEMICALS; \*CONTAMINATION; \*DRINKING WATER; \*GROUNDWATER; \*MONITORING; \*REGULATIONS; \*WATER SUPPLY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 283P. PRICE: \$34.95

ABSTRACT: THIS BOOK ADDRESSES CHEMICAL CONTAMINATION, ONE OF THE MAJOR ISSUES CONFRONTING THE NATION'S CURRENT AND FUTURE WATER SUPPLY. INFORMATION IS INCLUDED ON (1) SOURCES AND DISTRIBUTION OF SAFE DRINKING WATER, (2) CHEMICALS, (3) 10NITORING AND ANALYSIS, (4) REGULATIONS, AND (5) GROUNDWATER CONTAMINATION.

AVAILABILITY: LEWIS PUELISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12994

PUBLICATION DATE: 85

TITLE: WATER CHLORINATION: CHEMISTRY, ENVIRONMENTAL IMPACT AND HEALTH EFFECTS. VOLUME 5.

PERSONAL AUTHOR: JOLLEY, ROBERT L.. ED.: AND OTHERS

DESCRIPTOR: \*CHEMISTRY; \*CHLORINATION; \*DISINFECTION; \*ENVIRONMENTAL EFFECTS; \*TOXICOLOGY; \*WATER TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1575P. PRICE: \$79.95

ABSTRACT: THIS PUBLICATION IS THE PROCEEDINGS OF THE FIFTH CONFERENCE ON WATER CHLORINATION HELD AT THE COLLEGE OF WILLIAM AND MARY IN 1984. INCLUDED ARE 116 CHAPTERS IN 16 SECTIONS.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12995

PUBLICATION DATE: 85

TITLE: RIVER WATER QUALITY MONITORING.

PERSONAL AUTHOR: CANTER, LARRY W.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*GUIDES; \*MONITORING; \*PLANNING; \*RESEARCH; \*RIVERS; \*SAMPLING; \*WATER QUALITY; \*WATER SUPPLY



DESCRIPTIVE NOTE: 170P. PRICE: \$28.00

ABSTRACT: THIS GUIDE PROVIDES INFORMATION TO PLAN AND CONDUCT RIVER QUALITY STUDIES. SECTIONS ARE INCLUDED ON THE FOLLOWING TOPICS: (1) PRINCIPLES FOR PLANNING AND CONDUCTING WATER QUALITY STUDIES; (2) PRELIMINARY FIELDWORK; (3) SELECTION OF PARAMETERS TO BE MONITORED; (4) LOCATION OF SAMPLING STATIONS AND FREQUENCY OF SAMPLING; (5) SAMPLE COLLECTION AND ANALYSIS; AND (6) DATA ANALYSIS AND PRESENTATION.

AVAILABILITY: LEWIS PURLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12996

PUBLICATION DATE: OCT 85

TITLE: COASTAL WETLANDS.

PERSONAL AUTHOR: PRINCE, HAROLD H., ED.; D'ITRI, FRANK M., ED.

DESCRIPTOR: \*COASTAL WETLANDS; \*CONFERENCE PROCEEDINGS; ECOLOGY; \*GREAT LAKES; \*MANAGEMENT; \*WATER USE; \*WETLANDS

DESCRIPTIVE NOTE: 270P. PRICE: \$39.95

ABSTRACT: THIS BOOK PRESENTS A WEL! ROUNDED OVERVIEW OF COSTAL WETLANDS, MAINLY FOCUSING ON 1 E UNIQUE GREAT LAKES ECOSYSTEM, BUT VALUABLE AS WELL IN OTHER AREAS OF THE WORLD. SEVEN CHAPTERS DEAL WITH CURRENT WORK THAT CONTRIBUTES TO THE STATE OF KNOWLEDGE OF THE PROCESSES AND MANAGEMENT OF COSTAL WETLANDS. NINE OF THE 16 CHAPTERS SPELL OUT PRIORITIES FOR RESEARCH TO PROVIDE NEEDED FUTURE INFORMATION — THESE NINE CHAPTERS EACH INCLUDE PROGRAMMED DISCUSSION. (PROCEEDINGS OF FIRST GREAT LAKES WETLANDS COLLOQUIUM, NOV. 5-7, 1984, EAST LANSING, MICHIGAN.)

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12997

PUBLICATION DATE: 85

TITLE: MARINE AND ESTUARINE GEOCHEMISTRY.

PERSONAL AUTHOR: SIGLEO, A. C., ED.; HATTORI, AKIHIKO, ED.

DESCRIPTOR: \*ESTUARIES; \*GEOCHEMISTRY; \*INORGANIC CHEMISTRY; \*MARINE CHEMISTRY; \*METALS; \*ORGANIC CHEMISTRY; \*NUTRIENT CYCLES; \*TRACE METALS; \*TRANSPORT PROCESSES

DESCRIPTIVE NOTE: 331P. PRICE: \$39.00

ABSTRACT: TOPICS IN ORGANIC AND INORGANIC GEOCHEMISTRY, AS WELL AS DATA ON NUTRIENT CYCLING, ARE REPRESENTED IN THIS VOLUME. STUDIES OF SPECIFIC BIOGENIC COMPOUNDS ARE COMPLEMENTED BY STUDIES OF THE DISTRIBUTIONS AND FATE OF

ANTHROPOGENIC PCBS (POLYCHLORINATED BIPHENYLS). SILICONES AND THE PYROLYZATE STYRENE. MANY OF THE CHAPTERS EMPHASIZE THE NEED FOR IN-DEPTH MEASUREMENTS OVER ANNUAL CYCLES TO ESTABLISH BASELINE BIOGENIC INPUTS. THIS WOPK IS THE PROCEEDINGS OF THE SYMPOSIUM ON MARINE AND ESTUARINE GEOCHEMISTRY. INTERNATIONAL CHEMICAL CONGRESS OF PACIFIC BASIN SOCIETIES (HONOLULU, HAWAII, DEC. 16-21, 1984).

AVAILABILITY: LEWIS PUBLISHERS. INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12998

PUBLICATION DATE: 85

TITLE: INDUSTRIAL WASTE MANAGEMENT: RECOVERY, RECYCLE AND REUSE OF INDUSTRIAL WASTES.

PERSONAL AUTHOR: NOLL, KENNETH E.: AND OTHERS

DESCRIPTOR: \*CHEMICALS: \*HAZARDOUS WASTES; \*INDUSTRIAL WASTES; "MANAGEMENT; \*RECYCLING; \*RESOURCE RECOVERY: \*WASTE MANAGEMENT; \*WASTE REUSE; \*UNIT PROCESSES

DESCRIPTIVE NOTE: 196P. PRICE: \$24.95

ABSTRACT: THIS PUBLICATION PROVIDES AN OVERVIEW OF HOW VARIOUS PROCESSES CAN RECOVER POTENTIAL CONTAMINANTS FOR POTENTIAL REUSE. CHAPTERS INCLUDE RESOURCE RECOURTER FROM HAZARDOUS WASTE, SORPTION, MOLECULAR SEPARATIO, PHASE TRANSITION, CHEMICAL MODIFICATION, PHYSICAL DISPLAIN AND SEPARATION. INDIVIDUAL UNIT PROCESSES ARE PRESENTED WITH A BRIEF DISCUSSION OF THE PROCESS, ITS APPLICATIONS, AND THE TECHNOLOGICAL LIMITATIONS.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ12999

PUBLICATION DATE: 85

TITLE: PROCESS MODIFICATION FOR INDUSTRIAL POLLUTION SOURCE REDUCTION.

PERSONAL AUTHOR: TAVLARIDES, LAWRENCE L.

DESCRIPTOR: COAL INDUSTRY: ELECTROPLATING INDUSTRY: EXPLOSIVES INDUSTRY: FERTILIZER INDUSTRY: \*INDUSTRIAL WASTES: \*INDUSTRIAL POLLUTION: METALS INDUSTRY: PAPER INDUSTRY: POLLUTION CONTROL: \*PROCESS MODIFICATION: \*WASTE MANAGEMENT

DESCRIPTIVE NOTE: 150P. PRICE: \$24.95

ABSTRACT: THIS VOLUME SPECIALIZES IN PROCESS MODIFICATIONS TO REDUCE POLLUTION IN THE REFINING OF NON-FERROUS METALS, ELECTROPLATING. COAL CONVERSION, SPECIALTY CHEMICALS, IRON AND STEEL MAKING PAPER AND PULP, ALUMINUM AND PHOSPHATE FERTILIZER. ITS VALUE TO THE INDUSTRIES CONCERNED ARE THE



CHANGES RECOMMENDED IN THE MANUFACTURING PROCESSES THAT REDUCE THE POLLUTANT IMPACT ON THE ENVIRONMENT AND IN SOME CASES ARE MORE COST-EFFECTIVE.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ13ØØ1

PUBLICATION DATE: 85

TITLE: GUIDELINES FOR PREPARING PROPOSALS.

PERSONAL AUTHOR: MEADOR, ROY

DESCRIPTOR: \*CONTRACTS; \*FUNDING; \*GRANTS; \*GUIDELINES; \*PROPOSAL WRITING

DESCRIPTIVE NOTE: 116P. PRICE: \$19.95

ABSTRACT: THIS BOOK PRESENTS PROPOSAL PREPARATION GUIDELINES. INFORMATION IS INCLUDED ON OBTAINING PRIVATE AND GOVERNMENT FUNDS.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ13ØØ2

PUBLICATION DATE: OCT 85

TITLE: ENVIRONMENTAL IMPACTS OF WATER RESOURCES PROJECTS.

PERSONAL AUTHOR: CANTER, LARRY W.

DESCRIPTOR: \*CHANNELS: \*DAMS; \*DREDGING: \*ENVIRONMENTAL IMPACT: \*ENVIRONMENTAL IMPACT STATEMENTS; \*RESERVOIRS; \*WATER RESOURCES

DESCRIPTIVE NOTE: 352P. PRICE: \$39.95

ABSTRACT: WATER RESOURCES PROJECTS SUCH AS DAMS AND RESERVOIRS, CHANNELIZATION, AND DREDGING CAN REPRESENT LARGE-SCALE ENGINEERING WORKS OR ACTIVITIES THAT CAN CAUSE SIGNIFICANT IMPACTS ON PHYSICAL-CHEMICAL, BIOLOGICAL, CULTURAL, AND SOCIO-ECONOMIC COMPONENTS OF THE ENVIRONMENT. ENVIRONMENTAL IMPACT STUDIES FOR SUCH PROJECTS SHOULD BE PLANNED AND CONDUCTED IN A SCIENTIFICALLY DEFENSIBLE MANNER. THIS BOOK SUMMARIZES INFORMATION FROM KEY TECHNICAL LITERATURE RELATED TO THE IMPLEMENTATION OF SUCH STUDIES. THESE STUDIES SHOULD BE CONDUCTED BY METHODS THAT WILL YIELD PROJECTS MORE COMPAT'BLE WITH THE ENVIRONMENT.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: \_\_WØ13ØØ4

PUBLICATION DATE: NOV 85

TITLE: ARTIFICIAL RECHARGE OF GROUND WATER.

PERSONAL AUTHOR: O'HARE, MARGARET: AND OTHERS

DESCRIPTOR: AGRICULTURE; \*ARTIFICIAL RECHARGE; CASE STUDIES; \*GROUNDWATER; INDUSTRY; SITE SELECTION; \*WATER SUPPLY

DESCRIPTIVE NOTE: 450P. PRICE: \$49.95

ABSTRACT: THIS BOOK INTRODUCES ARTIFICIAL RECHARGE OF GROUNDWATER, THE EXTENT TO WHICH THIS APPROACH CAN HELP TO INCREASE AND IMPROVE THE WATER SUPPLY, RECOMMENDED USES, AND LOCATIONS WHERE IT CAN BE USED. SECTIONS ARE INCLUDED ON RECHARGE METHODS, SITE SELECTION AND EVALUATION, CASE STUDIES FOR ARTIFICIAL RECHARGE, AND POTENTIAL GEORGAPHIC AREAS FOR ARTIFICIAL RECHARGE.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ13ØØ5

PUBLICATION DATE: NOV 85

TITLE: SALT WATER INSTRUSION.

PERSONAL AUTHOR: ATKINSON, SAM F.: AND OTHERS

DESCRIPTOR: \*CONTAMINATION; \*GROUNDWATER; \*INTRUSION CONTROL; \*MANAGEMENT; \*POLLUTION CONTROL; \*SALT WATER INTRUSION; \*SURVEYS; \*WATER RESOURCES; \*WATER QUALITY, \*WATER SUPPLY

DESCRIPTIVE NOTE: 400P. PRICE: \$49.95

ABSTRACT: THIS BOOK PROVIDES AN INTRODUCTION TO SALT WATER INTRUSION INTO GROUND WATER. INFORMATION IS INCLUDED ON (1) SALINITY CONCERNS, (2) DESCRIPTION OF EFFECTS AND SOURCES OF SALT WATER INTRUSION, (3) SALINITY EVALUATION, CONTROL, AND MANAGEMENT, (4) STATE AND NATIONAL SURVEY DATA, AND (5) AREAS OF POTENTIAL SALINITY PROBLEMS.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ13ØØ6

PUBLICATION DATE: 85

TITLE: GROUNDWATER POLLUTION CONTROL.

PERSONAL AUTHOR: CANTER, L. W.; KNOX. ROBERT C.

DESCRIPTOR: \*CASE STUDIES; \*DECISION MAKING: \*GROUNDWATER; \*BIBLIOGRAPHIES: \*AQUIFER RESTORATION: \*POLLUTION CONTROL;



\*PUBLIC PARTICIPATION: \*RISK ASSESSMENT: \*TECHNOLOGY: \*WATER RESOURCES: \*WATER TREATMENT

DESCRIPTIVE NOTE: 529P. PRICE: \$49.95

ABSTRACT: THIS PUBLICATION CONTAINS THREE MAJOR SECTIONS. PART ONE CONSIDERS TECHNOLOGIES FOR GROUND WATER POLLUTION CONTROL. PART TWO IS CONCERNED WITH DECISION MAKING IN AQUIFER RESTORATION PROJECTS. PART THREE PRESENTS CASE STUDIES AND APPLICATIONS OF GROUND WATER POLLUTION CONTROL. THE APPENDICES CONTAIN CASE STUDIES AND BIBLIOGRAPHIES.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ13ØØ7

PUBLICATION DATE: 85

TITLE: SEPTIC TANK SYSTEM EFFECTS ON GROUND WATER QUALITY.

PERSONAL AUTHOR: CANTER, L. W.: KNOX, ROBERT C.

DESCRIPTOR: \*CONTAMINATION: \*DESIGN: \*GROUNEWATER: \*MONITORING: POLLUTION CONTROL: \*SEPTIC TANKS: \*WAS EWATER TREATMENT: \*WATER POLL' \*ON CONTROL: \*WATER QUALITY

DESCRIPTIVE NOTE: 336P. PRICE: \$29.95

ABSTRACT: THIS REFERENCE DELINEATES THE GROUND WATER QUALITY CONCERNS ASSOCIATED WITH THE PLANNING AND USAGE OF SEPTIC TANK SYSTEMS. SECTIONS ARE INCLUDED ON THE FOLLOWING TOPICS: (1) DESIGN OF SEPTIC TANK SYSTEMS; (2) GROUND WATER POLLUTION FROM SEPTIC TANK SYSTEMS; (3) METHODOLOGIES AND MODELING; AND (4) SUMMARY.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ13ØØ8

PUBLICATION DATE: DEC 05

TITLE: SLUDGE MANAGEMENT AND DISPOSAL FOR THE PRACTICING ENGINEER.

PERSONAL AUTHOR: VESILIND. P. AARNE; AND OTHERS

DESCRIPTOR: CASE STUDIES; DEWATERING; \*MANAGEMENT; \*OPERATIONS .WASTEWATER); REGULATIONS; \*SLUDGE; SLUDGE CHARACTERISTICS; \*SLUDGE DISPOSAL; SLUDGE STABILIZATION; TECHNOLOGY; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 340P. PRICE: \$49.95

ABSTRACT: THIS BOOK COUPLES THE POLICY AND TECHNOLOGY OF SLUDGE MANAGEMENT AND DISPOSAL WITH A CASE STUDY OF SOLUTIONS AND ALTERNATIVES FOR A U.S. MUNICIPALITY. THE VARIOUS SLUDGE TREATMENT TECHNOLOGIES AVAILABLE TO MUNICIPALITIES ARE DISCUSSED IN THE FIRST PART OF THE BOOK,

INCLUDING SLUDGE CHARACTERISTICS, THICKENING, DEWATERING, AND STABILIZATION. EXPERIENCES IN OPERATION AND PERFORMANCE ARE REVIEWED. REGULATORY CONSTRAINTS ARE COVERED IN DETAIL. THESE TECHNOLOGIES ARE THEN CONVERTED TO PRACTICE IN THE SECOND PART OF THE BOOK. A COMPREHENSIVE WASTEWATER SLUDGE DISPOSAL STUDY DEVELOPED FOR A MUNICIPALITY IS DESCRIBED IN CONSIDERED AND EVALUATED ON THE BASIS OF COST-EFFECTIVENESS, AND EVALUATED ON THE BASIS OF COST-EFFECTIVENESS, AND PUBLIC ACCEPTANCE. A NEW METHODOLOGY FOR QUANTITATIVELY RANKING ALTERNATIVES IS DESCRIBED AND ILLUSTRATED. (THIS TECHNIQUE CAN BE USED EFFECTIVELY IN THE EVALUATION OF ALTERNATIVE PUBLIC WORKS OTHER THAN SLUDGE DISPOSAL.) COST INFORMATION, O & M, AND VENDOP PERFORMANCE DATA ARE ALSO

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519, CHELSEA, MI 48118

IRIS ACCESSION NUMBER: EWØ13009

PUBLICATION DATE: OCT 85

TITLE: IRRIGATION WITH RECLAIMED MUNICIPAL WASTEWATER--A GUIDANCE MANUAL.

PERSONAL AUTHOR: PETTYGROVE, G. STUART: ASANO, TAKASHI

DESCRIPTOR: CALIFORNIA; \*IRRIGATION; ENVIRONMENTAL IMPACT: \*MANAGEMENT; PUBLIC HEALTH; REGULATIONS; \*RECYCLING; \*RESOURCE RECOVERY; \*WASTEWATER; \*WASTEWATER TREATMENT; \*WATER REUSE; \*WATER QUALITY

DESCRIPTIVE NOTE: 518P. PRICE: \$34.95

ABSTRACT: THIS PUBLICATION IS FOR USE IN THE PLANNING, DESIGN, AND OPERATION OF AGRICULTURAL AND LANDSCAPE IRRIGATION SYSTEMS USING RECLAIMED MUNICIPAL WASTEWATER. IT IS WRITTEN FOR CIVIL AND SANITARY ENGINEERS, AGRICULTURAL EXTENSINE WORKERS, AND AGRICULTURAL EXTENSINE WORKERS, AND CONSULTANTS. THE MANUAL IS ALSO USEFUL AS A REFERENCE FOR PUBLIC WORKS OFFICIALS, MUNICIPAL WASTEWATER TREATMENT PLANT OPERATORS, AND FOR COLLEGE AND UNIVERSITY USE. SEVERAL CHAPTERS WERE WRITTEN SPECIFICALLY FOR CALIFOPNIA READERS, SEMI-ARID ENVIRONMENTS AROUND THE WORLD. THE EMPHASIS AT THIS MANUAL IS ON THE BENEFICIAL USE OF RECLAIMED WASTEWATER FOR AGRICULTURAL AND LANDSCAPE IRRIGATION. THE GUIDANCE MANUAL EMPHASIZES IRRIGATION FOR THE PURPOSE OF OPTIMIZING CROP PRODUCTION; THEREFORE, IT INCLUDES DETAILED INSTRUCTION IN THE CALCULATION OF CROP WATER REQUIREMENTS. FURTHERMORE, THE BENEFITS AND LIMITATIONS OF USING RECLAIMED MUNICIPAL WASTEWATER FOR AGRICULTURAL AND LANDSCAPE IFRIGATION ARE DISCUSSED, AS ARE OTHER TOPICS OF SPECIAL INTEREST. INCLUDING WATER MANAGEMENT FOR SALINITY AND SCODICITY WASTEWATER IRRIGATION.

AVAILABILITY: LEWIS PUBLISHERS, INC., 121 SOUTH MAIN STREET, P.O. DRAWER 519. CHELSEA. MI 48118



IRIS ACCESSION NUMBER: EW#13#11 PUBLICATION DATE: 85

TITLE: LEGIONELLOSIS, VOLUME I.

PERSONAL AUTHOR: KATZ. SHEILA MORIBAR, ED.

DESCRIPTOR: \*DISEASE: \*LEGIONELLOSIS: \*MICROBIOLOGY: \*PUBLIC HEALTH

DESCRIPTIVE NOTE: 224P. PRICE: \$88.00. CATALOG NO.: 5233BE.

ABSTRACT: THIS TWO VOLUME REFERENCE PROVIDES AN IN-DEPTH. STATE-OF-THE-ART BOOK ON LEGIONNAIRES DISEASE, FOCUS IS ON PRACTICAL AND THEORETICAL ASPECTS OF THE DISEASE. THE CLINICAL PHASE, MANAGEMENT, THERAPEUTIC MODALITIES, AND END RESULTS OF TREATMENT ARE DISCUSSED. TABULATION OF STATISTICAL DATA AND ANALYSIS OF METHODS ARE ILLUSTRATED THROUGHOUT THE BOOK. VOLUME I DISCUSSES CURRENT PRESPECTIVES OF LEGIONELLA INCLUDING CLINICAL FEATURES AND THERAPY. HIGHLIGHTING THIS VOLUME IS AN INTERVIEW WITH DR. JOSEPH MCDADE. THE SCIENTIST WHO FIRST ISOLATED THE DISEASE.

AVAILABILI Y: CRC PRESS, INC., 2000 CORPORATE BLVD., N.W., BOCA RATO , FL  $33431\,$ 

TRIS ACCESSION NUMBER: EWØ13Ø12

PUBLICATION DATE: 85

TITLE: LEGIONELLOSIS. VOLUME II.

PERSONAL AUTHOR: KATZ, SHEILA MORIBAR, ED.

DESCRIPTOR: \*DIAGNOSIS · \*INSTRUCTIONAL MATERIALS: \*LEGIONNAIRES DISEASE. \*MICROBIOLOGY: \*POSTSECONDARY EDUCATION: \*PUBLIC HEALTH: \*TREATMENT

DESCRIPTIVE NOTE: 224P. PRICE: \$58.00. CATALOG NO.: 5234BE.

ABSTRACT: THIS REFERENCE PROVIDES THE SCIENTIFIC COMMUNITY WITH AN IN-DEPTH, STATE-OF-THE-ART BOOK ON LEGIONNAIRES DISEASE. FOCUS IS ON PRACTICAL AND THEORETICAL ASPECTS OF THE DISEASE MAKING THIS TEXT ESPECIALLY HELPFUL FOR CLINICIANS AND RESEARCHERS. THE CLINICAL PHASE, MANAGEMENT, THERAPEUTIC MODALITIES, AND END RESULTS OF TREATMENT ARE DISCUSSED BY EXPERTS. TABULATION OF STATISTICAL DATA AND ANALYSIS OF METHODS ARE ILLUSTRATED THROUGHOUT THE BOOK. THIS PUBLICATION, VOLUME II, DETAILS THE MICROBE INCLUDING DIAGNOSIS, EPIDEMIOLOGY, ECOLOGIC NICHE, TAXONOMY, BIOCHEMISTRY, AND PATHOLOGY. AN APPENDIX PRESENTS AN HISTORICAL REVIEW OF THE OUTBREAK IN PHILADELPHIA AND BRIEFLY DISCUSSES THE SOCIAL IMPACT OF THOSE EVENTS.

AVAILABILITY: CRC PRESS, INC., 2000 CORPORATE BLVD., N.W., BOCA RATON, FL 33431

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IRIS ACCESSION NUMBER: EWØ13Ø12 PUBLICATION DATE: 85

TITLE: ENVIRONMENTAL EXPOSURE FROM CHEMICALS. VOLUME I.

PERSONAL AUTHOR: NEELY, W. BROCK, ED.; BLAU, GARY E., ED.

DESCRIPTOR: \*AIR POLLUTION: \*CHEMICALS: CHEMICAL PROPERTIES: ENVIRONMENT; \*ENVIRONMENT\L IMPACT: MODELS: PHYSICAL PROPERTIES: \*SOILS: \*WATER POLL JTION

DESCRIPTIVE NOTE: 272P. PRICE: \$80.00. CATALOG NO. 6165BE.

ABSTRACT: THIS SERIES PROVIDES STATE-OF-THE-ART INFORMATION FOR ENVIRONMENTAL EXPOSURE ANALYSIS. FOR ENVIRONMENTAL EXPOSURE ANALYSIS, INCLUDING INVESTIGATIONS OF MOVEMENT, DISTRIBUTION AND FATE OF CHEMICALS IN THE ENVIRONMENT. IN VOLUME I, EACH OF THE SUBJECTS, RANGING FROM DETERMINING THE PHYSICAL PROPERTIES THROUGH SORPTION AND DECEMBER OF THE PHYSICAL PROPERTIES THROUGH SORPTION AND DEGRADATION REACTIONS, IS CRITICALLY THROUGH SURPTION AND DEGRADATION REACTIONS, IS CRITICALLY REVIEWED BY WELL-KNOWN INVESTIGATORS IN THE FIELD. SPECIFIC EXAMPLES ARE GIVEN FOR ILLUSTRATION; REAL WORLD APPLICATIONS ARE THEN ADDRESSED. FACH SYSTEM SUCH AS AIR, WATER, AND NONPOINT SOURCE IS COVERED SEPARATELY. AN INTRODUCTION TO RISK BENEFIT WALYSIS FROM CHEMICAL EXPOSURE IS ALSO INCLUDED.

AVAILABILITY: CRC PRESS, INC., 2000 CORPORATE BLVD., N.W., BOCA RATON, FL 33431

IRIS ACCESSION NUMBER: EWØ13Ø14

PUBLICATION DATE: 85

TITLE: ENVIRONMENTAL EXPOSURE FROM CHEMICALS. VOLUME II.

PERSONAL AUTHOR: NEELY, W. BROCK, ED.; BLAU, GARY E., ED.

DESCRIPTOR: \*AIR POLLUTION: \*CHEMICALS: PROPERTIES: \*CHEMICAL TRANSPORT: ENVIRONMENT: \*ENVIRONMENTAL IMPACT; MODELS; \*RISK ASSESSMENT; \*SOILS: \*SYSTEMS ANALYSIS: \*WATER POLLUTION

DESCRIPTIVE NOTE: 160P. POICE: \$60.00. CATALOG NO.: 6166BE.

ABSTRACT: THIS SERIES PROVIDES STATE-OF-THE-ART INFORMATION FOR ENVIRONMENTAL EXPOSURT ANALYSIS. INCLUDING INVESTIGATIONS MOVEMENT, DISTRIBUTION, AND FATE OF CHEMICALS IN THE ENVIRONMENT. IN VOLUME II PROPERTIES ARE INTEGRATED INTO A SERIES OF MATHEMATICAL MODELS WHICH DESCRIBE THE MOVEMENT OF THE CHEMICAL IN VARIOUS COMPARTMENTS. METHODS FOR BUILDING MODELS FROM CONTROLLED LABORATORY ECOSYSTEMS ARE DISCUSSED. TOGETHER WITH THE PROBLEM OF SCALE-UP AND VALIDATION IN THE FIELD. SPECIFIC EXAMPLES ARE GIVEN FOR ILLUSTRATION; REAL WORLD APPLICATIONS ARE THEN ADDRESSED. FACH SYSTEM SUCH AS AIR. WATER. AND ENVIRONMENTAL EXPOSURT ANALYSIS. ARE THEN ADDRESSED. EACH SYSTEM SUCH AS AIR, WATER, AND NONPOINT SOURCE IS COVERED SEPARATELY. AN INTRODUCTION TO RISK-BENEFIT ANALYSIS FROM CHEMICAL EXPOSURE IS ALSO INCLUDED.

AVAILABILITY: CRC PRESS, INC., 2895 CORPORATE BLVD., N.W., BOCA RATON. FL 33431

IRIS ACCESSION NUMBER: EWØ13Ø15

PUBLICATION DATE: 85

TITLE: TOXICOLOGICAL RISK ASSESSMENT. VOLUME I.

FERSONAL AUTHOR: CLAYTON, D. B., ED.: MUNRO, I., ED.

DESCRIPTOR: \*ENVIRONMENT; \*PUBLIC HEALTH; \*RISK ASSESSMENT; \*TOXIC SUBSTANCES; \*TOXICOLOGY

DESCRIPTIVE NOTE: 244P. PRICE: \$78.88. CATALOG NO.: 5976BE.

ABSTRACT: THIS SERIES DISCUSSES MEASUREMENTS OF CERTAIN ENVIRONMENTAL RISKS AND THEIR APPLICATION TO THE PELATIVELY LOW LEVELS TO WHICH HUMANS ARE GENERALLY EXPOSED. VOLUME I CONSIDERS THE BIOLOGICAL EVIDENCE AVAILABLE TO DEMONSTRATE POTENTIAL HAZARD TO HUMANS, AS WELL AS EXTRAPOLATIONS OF TOXICOLOGICAL DATA FROM HIGH TO LOW DOSES. CASE REPORTS ON ASBESTOS, VINYL CHOLORIDE, FORMALDEHYDE, PCBS, AND SACCHARIN ARE GIVEN AS EXAMPLES. EACH CHAPTER IS WRITTEN BY EXPERTS IN FIELDS THAT USE THE PRINCIPLES OF TOXICOLOGICAL RISK ASSESSMENT. THIS WORK IS DIRECTED TOWARD INDUSTRIALISTS, ACADEMIC AND REGULATORY TOXICOLOGISTS, BIOSTATISTICIANS, AND EPIDEMIOLOGISTS.

AVALLABILITY: CRC PRESS, INC.. 2000 CORPORATE BLVD.. N.W., BOCA RATON, FL 33431

IRIS ACCESSION NUMBER: EWØ13Ø16

FUBLICATION DATE: 85

TITLE: TOXICOLOGICAL RISK ASSESSMENT. VOLUME II.

PERSONAL AUTHOR: CLAYSON, D. B. ED.: AND OTHERS

DESCRIPTOR: \*CHEMICALS; \*DRIKKING WATER; \*ENVIRONMENT; \*NUTRITION; \*PUBLIC HEALTH; \*RISK ASSESSMENT; \*TOXIC SUBSTANCES; \*TOXICOLOGY

DESCRIPTIVE NOTE: 276P. PRICE: \$82.00. CATALOG NO.: 5977BE

ABSTRACT: THIS SERIES DISCUSSES MEASUREMENTS OF CERTAIN ENVIRONMENTAL RISKS AND THEIR APPLICATION TO THE RELATIVELY LOW LEVELS TO WHICH HUMANS ARE GENERALLY EXPOSED. VOLUME II ADDRESSES THE INTERPRETATION AND UTILIZATION OF INFORMATION ON SUCH RISKS, WITH EMPHASIS ON CHEMICAL CONTAMINATION OF DRINKING WATER, NUTRITION, AND HAZARDOUS CHEMICALS. CASE REPORTS ON ASBESTOS, CHLORIDE. FORMALDEHYDE, PCBS, AND SACCHARIN ARE GIVEN AS EXAMPLES. THE CHAPTER IS WRITTEN BY EXPERTS IN THE FIELDS THAT U. ZE THE PRINCIPLES OF TOXICOLOGICAL RISK ASSESSMENT. THIS WORK IS DIRECTED TOWARD INDUSTRIALISTS, ACADEMIC AND REGULATORY TOXICOLOGISTS, BIOSTATISTICIANS, AND EPIDEMIOLOGISTS.

AVAILABILITY: CRC PRESS, INC., 2000 CORPORATE BLVD., N.W., BOCA RATON, FL 33431

IRIS ACCESSION NUMBER: EWØ13Ø17

TITLE: WATER ANALYSIS, VOLUME I: INORGANIC SPECIES, PART I.

PERSONAL AUTHOR: MINEAR, R., ED.; KEITH, L., ED.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*CHEMICALS; \*INORGANIC ANALYSIS; \*INORGANIC CHEMICALS; \*LABORATORY PROCEDURES; \*WATER; \*WASTEWATER

DESCRIPTIVE NOTE: PRICE: \$44.00

ABSTRACT: THIS VOLUME PROVIDES IMPORTANT BACKGROUND INFORMATION ON THE STUDY OF INORGANIC CONSTITUENTS IN WATER.

AVAILABILITY: ACADEMIC PRESS, INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBOR DPIVE. ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ13Ø18

TITLE: WATER ANALYSIS, VOLUME II: INORGANIC SPECIES, PART 2.

PERSONAL AUTHOR: MINEAR, R., ED.; KEITH L., ED.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES: \*CHEMICALS: \*INORGANIC 4NALYSIS: \*INORGANIC CHEMICALS: \*LABORATORY PROCEDURES: \*WATER; \*WASTEWATER

DESCRIPTIVE NOTE: PRICE: \$65.00

ABSTRACT: THIS VOLUME REVIEWS AND REAPPRAISES THE CURRENT INSTRUMENTAL TECHNIQUES FOR INORGANIC ANALYSIS AS THEY SPECIFICALLY APPLY TO WATER AND WASTEWATER.

AVAILABILITY: ACADEMIC PRESS. INC., ATTN.: COMMERCIAL SALES DIVISION, 6277 SEA HARBOR DRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ13Ø19

TITLE: WATER ANALYSIS, VOLUME III: ORGANIC SPECIES.

PERSONAL AUTHOR: MINEAR, R., ED.; KEITH, L. ED.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES: \*CHEMICALS: \*LABORATORY PROCEDURES: \*ORGANIC COMPOUNDS: \*WATER: \*WASTEWATER

DESCRIPTIVE NOTE: PRICE: \$69.00

ABSTRACT: THIS VOLUME OF THE SET REPRESENTS A COULTCTION OF THE STATE-OF-THE ART METHODS IN CURRENT USE FOR ANYLYSIS OF ORGANIC CONSTITUENTS IN WATER.

AVAILABILITY: ACADWMIC PRESS. INC., ATTN.: COMMERCIAL

SALES DIVISION, 5277 SEA HARBOR DRIVE, ORLANDO, FL 32821

IRIS ACCESSION NUMBER: EWØ13Ø2Ø

PUBLICATION DATE: WIN. 86

TITLE: GROUND WATER SOFTWARE-TRIMMING THE CONFUSION.

PERSONAL AUTHOR: GRAVES, BARBARA

DESCRIPTOR: \*COMPUTER APPLICATIONS: \*COMPUTER SOFTWARE; \*GROUNDWATER: \*SOFTWARE DEVELOPERS: \*OFTWARE LISTINGS

DESCRIPTIVE NOTE: 44-53P.

ABSTRACT: THIS ARTICLE PRESENTS A LIST OF SOFTWARE DEVELOPERS AND DEALERS AND INCLUDES A PARTIAL LISTING OF PROGRAMS THEY HAVE DEVELOPED RELATED TO GROUNDWATER.

AVAILABILITY: GROUND WATER MONITORING REVIEW: V6 N1

IRIS ACCESSION NUMBER: EWØ13@21

PUBLICATION DATE: WIN. 86

TITLE: A COMPUTER DATA BASE FOR OVERVIEW OF GROUND WATER POLLUTION INVESTIGATIONS.

PERSONAL AUTHOR: HOFFMAN, JEFFREY L.

DESCRIPTOR: \*COMPUTER APPLICATIONS: \*COMPUTER SOFTEWARE; \*COMPUTER DATABASES: \*GROUNDWATER: \*MONITORING; \*NEW JERSEY: \*POLLUTION CONTROL: \*SITE EVALUATION

DESCRIPTIVE NOTE: 76-79P.

ABSTRACT: DESCRIBED ARE A SERIES OF COMPUTER PROGRAMS FOR DEVELOPING A DATABASE, ACCESSING THE DATABASE, AND PRODUCING A VARIETY OF REPORTS RELATED TO MONITORING AND INVESTIGATING GROUND WATER POLLUTION SITES. THE PROGRAMS WERE DEVELOPED BY THE NEW JERSEY GEOLOGICAL SURVEY.

AVAILABILITY: GROUND WATER MONITORING REVIEW; V6 N1

IRIS ACCESSION NUMBER: EWØ13Ø22

PUBLICATION DATE: JAN 85

TITLE: LETHAL AND SUB-LETHAL EFFECTS OF DISPERSANTS AND OIL-DISPERSANT MIXTURES ON MARINE ORGANISMS-A SYNOPSIS.

PERSONAL AUTHOR: WELLS, P. G.

DESCRIPTOR: \*DISPERSANTS; \*ENVIRONMENTAL EFFECTS: \*ENVIRONMENIAL IMPACT: \*MARINE ORGANISMS: \*OIL DISPERSANTS: \*OIL SPILLS: \*ORGANISMS: \*TOXICOLOGY

DESCRIPTIVE NOTE: 11-18P.

ABSTRACT: PRESENTED IS RECENT KNOWLEDGE ON THE EFFECTS OF DISPERSANTS AND OIL-DISPERSANT MIXTURES ON MARINE ORGANISMS.

AVAILABILITY: SPILL TECHNOLOGY NEWSLETTER; V10 N1-3

IRIS ACCESSION NUMBER: EW013023

PUBLICATION DATE: JAN 85

TITLE: A LIGHT WEIGHT AND LOW-COST FIREPROOF BOOM.

PERSONAL AUTHOR: LAPERRIERE, F.

DESCRIPTOR: \*BOOMS; \*CONTAINMENT; \*OIL SPILLS

DESCRIPTIVE NOTE: 26-33P.

ABSTRACT: DESCRIBED IS A LIGHTWEIGHT AND LOWCOST FIREPROOF BOOM FOR CONTAINING OIL.

AVAILABILITY: SPILL TECHNOLOGY NEWSLETTER; V10 N1-3

IRIS ACCESSION NUMBER: EWØ13Ø24

PUBLICATION DATE: JAN 86

TITLE: 1986 ENVIRONMENTAL SOFTWARE REVIEW.

PERSONAL AUTHOR: BROWN, JACK

DESCRIPTIVE NOTE: 18-29P.

ABSTRACT: THIS ARTICLE PRESENTS DESCRIPTIVE INFORMATION ON ENVIRONMENTAL SOFTWARE. INFORMATION FOR THE APPLICATIONS OF EACH PROGRAM IS PRESENTED AS WELL AS THE COMPUTER REQUIREMENTS FOR USING THE MATERIALS AND THE SOURCE OF THE MATERIALS.

AVAILABILITY: POLLUTION ENGINEERING; V18 N1

IRIS ACCESSION NUMBER: EWØ13Ø25

PUBLICATION DATE: JAN 86

TITLE: WHY COMPUTERS FOR WASTEWATER OPERATIONS?

PERSONAL AUTHOR: RADICK, KEITH A.

DESCRIPTOR: \*COMPUTER APPLICATIONS: \*COSTS: \*MANAGEME: \*OPERATIONS (WASTEWATER); \*TIME: \*WASTEWATER THEATMENT



DESCRIPTIVE NOTE: 36-37P.

ABSTRACT: THIS ARTICLE PRESENTS REASONS FOR USING COMFUTERS FOR WASTEWATER OPERATIONS. THE MAJOR REASONS ARE TIME AND MONEY.

AVAILABILITY: POLLUTION ENGINEERING; V18 N1

IRIS ACCESSION NUMBER: EWØ13Ø26

PUBLICATION DATE: JAN 86

TITLE: DESIGNING AN EVAPORATION SPRAY POND FOR POLLUTANTS.

PERSONAL AUTHOR: GRABACKI. E.

DESCRIPTOR: CONSTRUCTION; \*DESIGN; COSTS; \*EVAPORATION PONDS; \*FACILITIES; \*POLLUTANTS; \*SPRAY EVAPORATION PONDS

DESCRIPTIVE NOTE: 38-39P.

ABSTRACT: DESCRIBED IS THE DESIGN OF EVAPORATION SPRAY PONDS FOR POLLUTANTS. THE EFFECIENCY OF THE POND IS ALSO DISCUSSED.

AVAILABILITY: POLLUTION ENGINEERING: V18 N1

IRIS ACCESSION NUMBER: EW813827

PUBLICATION DATE: JAN 86

TITLE: HYDRAULIC RAKE HANDLES SMELLY SLUDGE.

PERSONAL AUTHOR: ACKERMAN, JOHN R.

DESCRIPTOR: \*EQUIPMENT; \*HYDRAULIC RAKES; \*SLUDGE HANDLING; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 48-41P.

ABSTRACT: DESCRIBED IS A HYDRAULIC RAKE FOR HANDLING WASTEWATER TREATMENT SLUDGE.

AVAILABILITY: POLLUTION ENGINEERING; V18 N1

IRIS ACCESSION NUMBER: EWØ13Ø28

PUBLICATION DATE: JAN 86

TITLE: OPTIMIZING OPERATIONAL COSTS.

PERSONAL AUTHOR: BLACKWELL, LARRY G.; LANGWORTHY, VIRGIL W.

DESCRIPTOR: \*COMPUTER APPLICATIONS: \*COMPUTER SOFTWARE: \*COSTS: \*MANAGEMENT: \*OPERATIONS (WASTEWATER): \*PERFORMANCE EVALUATION: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 21. 45P.

ABSTRACT: DESCRIBED IS THE USE OF COMPUTER SOFTWARE TO DETERMINE THE OPTIMUM OPERATIONAL COSTS OF WASTEWATER TREATMENT.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT: V133 N1

IRIS ACCESSION NUMBER: EWØ13Ø29

PUBLICATION DATE: JAN 86

TITLE: MUNICIPAL PRETREATMENT PROGRAM GOES ON-LINE.

PERSONAL AUTHOR: HUBBELL, GEORGE E.: AND OTHEPS

DESCRIPTOR: \*INDUSTRIAL WASTES: \*MONITORING: \*MICHIGAN: \*OPERATIONS (WASTEWATER): \*PRETREATMENT: \*PLANNING; \*USER SURVEYS: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 22-24P.

ABSTRACT: DESCRIBES HOW A MICHIGAN CITY WITH A LARGE NONDOMESTIC USER BASE AND A FLEXIBLE DISCHARGE PERMITTING SYSTEM DEVELOPED AND IMPLEMENTED A PRETREATMENT PROGRAM.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT: V133 N1

IRIS ACCESSION NUMBER: EWØ'3Ø3Ø

PUBLICATION DATE: JAN 86

TITLE: CHEMICAL BID PACKAGE CUTS COSTS. IMPROVES CONTROLS.

PERSONAL AUTHOR: CLUNE, JAMES J.

DESCRIPTOR: \*BIDDING; \*CHEMICALS; \*COSTS; \*PURCHASING; \*WASTEWATER TREATMENT: \*WATER TREATMENT

DESCRIPTIVE NOTE: 25, 28-30P.

ABSTRACT: PURCHASING WATER AND WASTEWATER TREATMENT CHEMICALS CAN BE MADE MORE COST EFFECTIVE BY USING A COMPETITIVE BIDDING PROCESS. DESCRIBED IS A CHEMICAL BID PROCESS USED BY A FLORIDA UTILITY.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT: V133 N1

IRIS ACCESSION NUMBER: EWØ13Ø31

PUBLICATION DATE: JAN 86

TITLE: COMPUTERS JOIN THE MAINTENANCE TEAM.

PERSONAL AUTHOR: SUTTON, GEORGE

DESCRIPTOR: \*COMPUTER APPLICITIONS: \*FLORIDA: \*MAINTENANCE; \*MANAGEMENT; \*OPERATIONS (WA ER); \*OPERATIONS (WASTEWATER); \*WATER TREATMENT: \*WASTEVATE? TREATMENT

DESCRIPTIVE NOTE: 31-33P.
ABSTRACT: A COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM HELPS THE STAFF AT A FLORIDA WATER UTILITY RUN THE OPERATION MORE EFFECTIVELY.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT; V133 N1

IRIS ACCESSION NUMBER: EWØ13Ø32

PUBLICATION DATE: JAN 86

TITLE: THE PRACTICALITIES OF MANHOLE ENTRY.

PERSONAL AUTHOR: CONKLIN, JAMES T.

DESCRIPTOR: \*ACCIDENT PREVENTION; \*MAINTENANCE; \*MANHOLES; \*SAFETY: \*SEWERS; \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 34-35P.

ABSTRACT: ENTERING A WASTEWATER COLLECTION SYSTEM IS A MAINTENANCE DUTY THAT OCCURES FREQUENTLY EVERY DAY ALL OVER THE COUNTRY. DESCRIBED ARE THINGS TO DO AND NOT TO DO.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT; V133 N1

IRIS ACCESSION NUMBER: EWØ13Ø33

PUBLICATION DATE: JUN 85

TITLE: HANDBOOK: ESTIMATING SLUDGE MANAGEMENT COSTS.

DESCRIPTOR: \*COSTS: \*HANDBOOKS: \*MAINTENANCE: \*MANAGEMENT; \*OPERATIONS (WASTEWATER); \*SLUDGE: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 560P. FREE AS LONG AS SUPPLY LASTS.

ABSTRACT: THIS MANUAL PROVIDES PRELIMINARY COST ESTIMATING CURVES, COVERING BOTH CAPITAL COSTS AND ANNUAL OPERATING AND MAINTENANCE (0&M) COSTS. FOR COMMONLY USED PROCESSES IN MUNICIPAL WASTEWATER SLUDGE TREATMENT, STORAGE, TRANSPORT, USE, OR DISPOSAL. IN ADDITION, ANNUAL O&M COMPONENT CURVES, WHICH PROVIDE ADDITIONAL USER FLEXIBILITY, ARE ALSO INCLUDED. CURVES ARE BASED ON THE COST ALGORITHMS CONTAINED IN APPENDIX A. THE PROCESSES CAN BE READILY ARRANGED INTO VARIOUS SLUDGE MANAGEMENT CHAINS AND PRELIMINARY COSTS ESTIMATED FOR EACH SLUDGE MANAGEMENT CHAIN TO BE EVALUATED. COSTS PRESENTED ARE BASED ON THE LAST QUARTER OF 1984, AND CAN BE UPDATED TO LATER YEARS BY USE OF APPROPRIATE COST INDEXES. AN ANNOTATED BIBLIOGRAPHY OF SELECTED LITERATURE CONTAINING SLUDGE MANAGEMENT COST ESTIMATING INFORMATION IS INCLUDED IN APPENDIX B. APPENDIX C PROVIDES COMMONLY USED ENGLISH TO METRIC CONVERSION FACTORS.

AVAILABILITY: TECHNOLOGY TRANSFER, 26 WEST ST. CLAIR, CINCINNATI, OH 45268

IR - ACCESSION NUMBER: EWØ13Ø34 PUBLICATION DATE: SEP 85

TITLE: SEMINAR PUBLICATION: PROTECTION OF PUBLIC WATER SUPPLIES FROM GROUND-WATER CONTAMINATION.

DESCRIPTOR: \*CONTAMINATION: \*GROUNDWATER: HYDROLOGY: \*INSTRUCTIONAL MATERIALS: MANAGEMENT: RECLAMATION: \*POLLUTION CONTROL; POSTSECONDARY EDUCATION: \*WATER SUPPLY; WATER TREATMENT

DESCRIPTIVE NOTE: 186P. FREE AS LONG AS SUPPLY LASTS.

ABSTRACT: THIS SEMINAR PUBLICATION CONTAINS MATERIALS FROM TECHNOLOGY TRANSFER SEMINARS FOR THE WATER SUPPLY COMMUNITY. THIS PUBLICATION PROVIDES AN ORGANIZED APPROACH TO ACQUIRING THE KNOWLEDGE NECESSARY FOR EFFECTIVE AND EFFICIENT MANAGEMENT OF GROUNDWATER SUPPLIES. THE INFORMATION PROVIDED IS APPLICABLE TO ALL REGIONS OF THE UNITED STATES, TAKING INTO ACCOUNT DIFFERENCES IN GEOGRAPHIC LOCATION, FROM THE HUMID TO THE ARID, AND IN GEOLOGIC COMPOSITION, FROM THE POROUS TO THE IMPERMEABLE.

AVAILABILITY: TECHNOLOGY TRANSFER, 26 WEST ST. CLAIR, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EWØ13Ø35

PUBLICATION DATE: OCT 84

TITLE: PROCESS DESIGN MANUAL: LAND TREATMENT OF MUNICIPAL WASTEWATER: SUPPLEMENT ON RAPID INFILTRATION AND OVERLAND FLOW.

DESCRIPTOR: \*DESIGN: \*CONSTRUCTION: \*INFILTRATION: \*LAND TREATMENT: \*OPERATIONS (WASTEWATER): \*OVERLAND FLOW: \*FACILITIES: \*PROCESS DESIGN MANUALS: \*RESEARCH REPORTS: \*TECHNOLOGY: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 131P. FREE AS LONG AS SUPPLY LASTS.

ABSTRACT: THIS DOCUMENT IS INTENDED AS A SUPPLEMENT TO THE 1981 TECHNOLOGY TRANSFER PROCESS DESIGN MANUAL FOR LAND TREATMENT OF MUNICIPAL WASTEWATER, (EPA 625/1-81-313). THROUGHOUT THIS DOCUMENT, THE 1981 PROCESS DESIGN MANUAL WILL BE REFERRED TO AS THE MANUAL. PART I IN THIS TEXT COVERS DESIGN OF RAPID INFILTRATION SYSTEMS AND PART II DISCUSSES OVERLAND FLOW SYSTEMS. A SUBSTANTIAL AMOUNT OF NEW INFORMATION ON BOTH THE CONCEPTS AND THEIR PERFORMANCE HAS BEEN DEVELOPED SINCE 1980-81. PART I ON RAPID INFILTRATION PROVIDES ADDITIONAL GUIDANCE AND DETAIL ON PLANNING, DESIGN. CONSTRUCTION, AND OPERATION OF RAPID INFILTRATION SYSTEMS TO AVOID PROBLES WHICH HAVE BEEN OBSERVED AT A FEW RECENTLY CONSTRUCTED SYSTEMS. THE BASIC CRITERIA IN THE 1981 MANUAL ARE STILL VALID AND ARE NOT REPEATED IN THIS TEXT. PART II ON OVERLAND SLOW SUPPLEMENTS THE 1981 DESIGN BASIS WITH INFORMATION FROM OPERATING MUNICIPAL FACILITIES, AS WELL AS ADDITIONAL RESULTS FROM RESEARCH STUDIES COMPLETED IN THE PERIOD DECEMBER 1980 TO MARCH 1984. THIS INFORMATION REINFORCES AND STRENGTHENS THE BASIS FOR THIS RAPIDLY DEVELOPING TECHNOLOGY.



AVAILABILITY: TECHNOLOGY TRANSFER, 26 WEST ST. CLAIR, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EWØ13Ø36

PUBLICATION DATE: AUG 85

TITLE: SEMINAR PUBLICATION: COMPOSTING OF MUNICIPAL WASTEWATER SLUDGES.

DESCRIPTOR: \*COMPOSTING; ECONOMICS; \*FACILITIES; MANAGEMENT; MARKETING; PUBLIC HEALTH; \*RESOURCE RECOVERY; REGULATIONS; \*SLUDGE; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 72P. FREE AS LONG AS SUPPLY LASTS.

ABSTRACT: THIS PUBLICATION PROVIDES PRACTICAL INFORMATION ON CURRENT METHODS OF COMPOSTING MUNICIPAL WASTEWATER SLUDGES. IT IS 'NTENDED FOR GOVERNMENT AND PRIVATE SECTOR INDIVIDUALS INVOLVED IN THE PLANNING, DESIGN, AND OPERATION OF MUNICIPAL SLUDGE TREATMENT AND DISPOSAL SYSTEMS. CHAPTER 1 PRESENTS GENERAL PRINCIPLES OF THE CO. 19OSTING PROCESS AND SYSTEM DESIGN, INCLUDING WINDKOW, STATIC PILE, AND IN-VESSEL SYSTEMS; PUBLIC RELATIONS; AESTHETIC CONSIDERATIONS; MARKETING AND DISTRIBUTION OF COMPOST; ECONOMICS; DESIGN AND SITE LAYOUT CONSIDERATIONS; MONITORING; EQUIPMENT SELECTION; AND PUBLIC LTH CONSIDERATIONS. CHAPTER 2 AND 3 DISCUSS IN DEPTH THE EXPERIENCES AT THE DICKERSON, WESTERN BRANCH, AND SITE II STATIC PILE COMPOSTING OPERATIONS IN MARYLAND, AND AT THE WINDROW OPERATION IN LOS ANGELES COUNTY. IN-VESSEL COMPOSTING IS REVIEWE) IN CHAPTER 4. CHAPTER 5 DISCUSSES CURRENT AND PROPOSED REGULATIONS AND GUIDELINES THAT PERTAIN TO SLUDGE COMPOSTING.

AVAILABILITY: TECHNOLOGY TRANSFER, 26 WEST ST. CLAIR, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EWØ13Ø37

PUBLICATION DATE: OCT 85

TITLE: DESIGN MANUAL: ODOR AND CORROSION CONTROL IN SANITARY SEWERAGE SYSTEMS AND TREATMENT PLANTS.

DESCRIPTOR: \*CORROSION CONTROL; \*DESIGN MANUALS; \*EQUIPMENT; \*FACILITIES; \*ODORS; \*SEWERS; \*SLUFIDES, \*WASTEWATER COLLECTION: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 141P. FREE AS LONG AS SUPPLY LASTS.

ABSTRACT: SINCE PUBLICATION OF THE PROCESS DESIGN MANUAL FOR SULFIDE CONTROL IN SANITARY SEWERAGE SYSTEMS IN 1974, SUBSTANTIAL INFORMATION ON OPORS AND CORROSION IN MUNICIPAL SEWERAGE SYSTEMS HAS BEEN REPORTED. IN ADDITION, SIGNIFICANT DEVELOPMENTS HAVE EVOLVED FOR THE CONTROL OF ODORS AND CORROSION IN WASTEWATER TREATMENT PLANTS. IN PARTICULAR, USE OF CHEMICALS FOR ODOR AND CORROSION CONTROL HAS INCREASED SUBSTANTIALLY. INCLUSION OF THESE ADVANCES IS THE PRIMARY REASON FOR REVISING THIS MANUAL. TJ FURTHER THE UNDERSTANDING OF ODOR AND CORROSION CONTROL IN SEWERAGE

SYSTEMS AND TREATMENT WORKS. MANY CASE HISTOPIES AND EXAMPLES HAVE BEEN ADDED ALSO. THE NEED EXISTS FOR A COMPREHENSIVE DESIGN MANUAL THAT BRINGS TOGETHER AVAILABLE INFORMATION IN A FORM CONVENIENT FOR THOSE DESIGNING NEW SYSTEMS OR APPLYING ODOR AND CORROSION CONTROL PROCEDURES IN EXISTING SYSTEMS. THIS MANUAL IS INTENDED TO SATISFY THIS NEED. WHILE SULFIDE CONTROL IS NOW A WELL DEVELOPED TECHNOLOGY, CONTINUING ADVANCES IN BASIC KNOWLEDGE AND IN CONTROL PROCEDURES ARE TO BE EXPECTED. APPLICATION OF THE ART IN ITS PRESENT STATE. HOWEVER, AS SET FORTH IN THIS MANUAL, CAN OVERCOME SULFIDE PRODUCING TENDENCIES IN EXISTING SYSTEMS AND HELP MINIMIZE FUTURE PROBLEMS.

AVAILABILITY: TECHNOLOGY TRANSFER, 26 WEST ST. CLAIR. CINCINNATI. OH 45268

IRIS ACCESSION NUMBER: EWØ13Ø38

PUBLICATION DATE: OCT 85

TITLE: HANDBOO: REMEDIAL ACTION AT WASTE DISPOSAL SITES (REVISED).

DESCRIPTOR: DESIGN; CONSTRUCTION: \*HANDBOOKS: MAINTENANCE; MONITORING; OPERATIONS (WASTES); \*REMEDIAL ACTION: TECHNOLOGY; \*WASTE DISPOSAL: \*WASTE SITES

DESCRIPTIVE NOTE: 587P. FREE AS LONG AS SUPPLY LASTS.

ABSTRACT: THIS HANDBOOK IS INTENDED FOR USE AS A BASIC REFERENCE TOOL ON REMEDIAL ACTION. IT WILL ASSIST GOVERNMENTAL AND INDUSTRIAL OFFICIALS AND TECHNICAL PERSONS IN UNDERSTANDING REMEDIAL TECHNOLOGIES: SELECTING POTENTIALLY APPLICABLE TECHNOLOGIES FOR A GIVEN WASTE SITE. AND PLANNING FOR REMEDIAL ACTION. THE HANDBOOK BEGINS WITH AN OVERVIEW OF THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) PROCESS AS OUTLINED IN THE NATIONAL CONTINGENCY PLAN (NCP). THE REMAINING SECTIONS OF THE DOCUMENT DESCRIBE REMEDIAL TECHNOLOGIES. THE TECHNOLOGIES ARE ORGANIZED ACCORDING TO THE TYPE OF SITE PROBLEM THEY ARE INTENDED TO REMEDY (E.G., SURFACE WATER CONTROLS, GROUNDWATER CONTROLS). EMPHASIS IS PLACED ON THOSE TECHNOLOGIES WHICH HAVE BEEN DEMONSTRATED FOR HAZZARDOUS WASTE SITES. HOWEVER. LESS DETAILED INFORMATION IS ALSO INCLUDED ON EMERGING TECHNOLOGIES. ESTABLISHED TECHNOLOGIES ARE GENERALLY DESCRIBED IN TERMS OF THE FOLLOWING FACTORS: (1) GENERAL DESCRIPTION; (2) APPLICATIONS AND LIMITATIONS; (3) DESIGN CONSIDERATIONS; (5) OPERATION, MAINTENANCE, AND MONITORING: (6) TECHNOLOGY SELECTION/EVALUATION; AND (7) COSTS.

AVAILABILITY: TECHNOLOGY TRANSFER, 26 WEST ST. CLAIR, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EWØ13Ø39

PUBLICATION DATE: APR 85

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): SUPPLEMENT 21.

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*INDEXES; \*INSTRUCTIONAL MATERIALS; \*POSTSECONDARY EDUCATION; \*TECHNOLOGY; \*WASTE DISPOSAL; \*REFERENCE MATERIALS; \*WASTEWATER; \*WATER; AUALITY; \*WATER RESOURCES; \*WATER TREATMENT; \*HAZARDOUS MATERIALS; \*TOXIC SUBSTANCES; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 110P. SUBSCRIPTION \$12.00, SINGLE COPIES \$5.00

ABSTRACT: COMPILED ARE ABSTRACTS AND INDEXES TO SELECTED MATERIALS RELATED TO WASTEWATER NON-PRINT PRINT AND TREATMENT AND WATER QUALITY EDUCATION AND INSTRUCTION, AS WELL AS MATERIALS RELATED TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION. SOURCES OF ABSTRACTED/INDEXED INCLUDE ALL LEVELS OF GOVERNMENT, PRIVATE AND EDUCATIONAL INSTITUTIONS. TITLE, AUTHOR(S). CONCERNS. DESCRIPTORS, CROSS-REFERENCES, PUBLICATION DATE, AVAĪLABILITY ARE PROVIDED FOR EACH ENTRY. ALSO INCLUDED ARE PROCEDURES TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULUM DEVELOPERS IN THE WATER QUALITY CONTROL TELD CAN LOCATE INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY PECIFIC REQUIREMENTS OF THEIR PROGRAMS. THIS PUBLICATION INSTRUCTIONA'. AND DOES NOT REPLACE "WATER SUPPLEMENTS INFORMATION SYSTEM (IRIS): A INSTRUCTIONAL RESOURCES COMPILATION OF ABSTRACTS TO WATER QUALITY AND WATER RESOURCES" OR IRIS SUPPLEMENTS I-20.

AVAILABILITY: ENVIPONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ

PUBLICATION DATE: JUL 85

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS), SUPPLEMENT 22.

DESCRIPTOR: \*AUDIOVISUAL AIDS; ^INDEXES; \*INSTRUCTIONAL MATERIALS: \*POSTSECONDARY EDUCATION, \*TECHNOLOGY: \*WASTE DISPOSAL; \*REFERENCE MATERIALS; \*WASTEWATER; \*WATER: \*WATER QUALITY: \*WATEP RESOURCES; \*WASTEWATER TREATMENT; \*HAZARDOUS MATERIALS; \*TOXIC SUBSTANCES; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 107P. SUBSCRIPTION \$12.00, SINGLE COPIES \$5.00

ABSTRACT: COMPILED ARE ABSTRACTS AND INDEXES TO SELECTED NON-PRINT MATERIALS RELATED TO WASTEWATER PRINT AND TREATMENT AND WATER QUALITY EDUCATION AND INSTRUCTION, AS WELL AS MATERIALS RELATED TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION. SOURCES OF ABSTRACTED/INDEXED INCLUDE ALL LEVELS OF GOVERNMENT, PRIVATE AND EDUCATIONAL INSTITUTIONS. TITLE, AUTHOR(S). MATERIALS CONCERNS, CROSS-REFERENCES, DESCRIPTORS, AND DATE, PUBLICATION AVAILABILITY ARE PROVIDED FOR EACH ENTRY. ALSO INCLUDED ARE PROCEDURES TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULUM DEVELOPERS IN THE WATER QUALITY CONTROL FIELD CAN LOCATE INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY SPECIFIC REQUIREMENTS OF THEIR PROGRAMS. THIS PUBLICATION DOES NOT REPLACE "WATER SUPPLEMENTS AND QUALITY RESOURCES INFORMATION SYSTEM (IRIS): INSTRUCTIONAL ABSTRACTS TO WATER QUALITY AND WATER COMPILATION OF

RESOURCES" OR IRIS SUPPLEMENTS I-21.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø41

PUBLICATION DATE: OCT 85

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS), SUPPLEMENT 23.

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*INDEXES; \*INSTRUCTIONAL MATERIALS; \*POSTSECONDARY EDUCATION: \*TECHNOLOGY: \*WASTE DISPOSAL; \*REFE NCE MATERIALS; \*WASTEWATER; \*WATER; \*WATER OUALITY; \*WATER .ESOURCES; \*WASTEWATER TREATMENT; \*HAZARDOUS MATERIALS: \*TOXIC SUBSTANCES: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 108P. SUBSCRIPTION: \$12.00, SINGLE CPOIES: \$5.00

ABSTRACT: COMPILED ARE ABSTRACTS AND INDEXES TO SELECTED MATERIALS RELATED TO WASTEWATER PRINT AND NON-PRINT TREATMENT AND WATER QUALITY EDUCATION AND INSTRUCTION, AS WELL AS MATERIALS RELATED TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION. SOURCES OF ABSTRACTED/INDEXED INCLUDE ALL LEVELS OF GOVERNMENT, PRIVATE MATERIALS CONCERNS, AND EDUCATIONAL INSTITUTIONS. TITLE, AUTHOR(S), DATE, CROSS-REFERENCES. DESCRIPTORS. PUBLICATION AVAILABILITY ARE PROVIDED FOR EACH ENTRY. ALSO INCLUDED ARE TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULUM PROCEDURES IN THE WATER QUALITY CONTROL FIELD CAN LOCATE DEVELOPERS INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY SPEJIFIC REQUIREMENTS OF THEIR PROGRAMS. THIS PUBLICATION AND DOES "WATER SUPPLEMENTS NOT REPLACE YTI JAUC RESOURCES SYSTEM (IRIS): A INSTRUCTIONAL INFORMATION ABSTRACTS TO WATER QUALITY AND WATER COMPILATION OF RESOURCES" OR IRIS SUPPLEMENTS 1-23.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, 0:1 43212

IRIS ACCESSION NUMBER: EWØ13Ø42

PUBLICATION DATE: FEB 85

TITLE: SURVIVAL OF PARASITE EGGS IN STORED SLUDGE.

PERSONAL AUTHOR: KANESHIRO. EDNA S.: STERN, GERALD

DESCRIPTOR: \*RESEARCH REPORTS: \*PARASITES; \*PARASITE EGGS: \*PUBLIC HEALTH; \*SLUDGE; SLUDGE LAGOONING; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 101P. PRICE: \$7.06

ABSTRACT: THE INACTIVATION RATES OF DIGESTER-RESISTANT PARASITE EGGS IN LABORATORY STORED SLUDGE WERE MEASURED TO DETERMINE THEIR POTENTIAL FATE IN SLUDGE LAGOONS. EGGS FROM ROUNDWORMS (ASCARIS, TOXOCARA AND TRICHURIS) AND A TAPEWORM



(HYMENOLEPIS) WERE ADDED TO DOMESTIC SLUDGES EITHER BEFORE AND DURING, OR AFTER AEROBIC OR ANAEROBIC DIGESTION. DEGESTED SLUDGE SAMPLES SEEDED WITH THE PARASITE EGGS WERE STOREP IN THE LABORATORY AT 4C, 25C. AND IN A CONTAINER THAT WAS JERTED IN THE GROUND TO SIM, LATE SLUDGE STORAGE CONDITIONS. NON-SLUDGF SOIL SAMPLES (CONTROLS) WERE SEEDED WITH THE SAME PARASITES AS THE DIGESTED SLUDGES AND STORED UNDER SIMILAR CONDITIONS. THE TOTAL NUMBER OF EGGS RECOVERED FROM THE SAMPLES DECREASED AS STORAGE TIME AND TEMPERATURE INCREASLD. THESE CONTROLED LABORATORY STUDIES SUGGEST THAT SLUDGE LAGOONING CAN BE , I EFFECTIVE METHOD FOR ELIMINATING PARASITE EGGS, PARTICULARLY IN WARMER GEOGRAPHIC LOCATIONS.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, COM 310. COLUMBUS. OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø43

PUE .. ATION DATE: FEB 85

TITLE: PROTOCO: DEVELOPMENT FOR THE PREDICTION OF THE FATE OF ORGANIC PRIORITY POLLUTANTS IN BIOLOGICAL WASTEWATER TREATMENT SYSTEMS.

PERSONAL AUTHOR: KIRSCH, E. J.: AND OTHERS

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*BIOLOGICAL TREATMENT; \*BIODEGRADABILITY; \*HAZARDOUS SUBSTANCES: \*LABCRATORY PROCEDURES; \*ORGANIC CHEMICALS; \*TESTING PROTOCOL: \*TOXIC SUBSTANCES; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 162P. PRICE: \$10.72

ABSTRACT: RESEARCH WAS CONDUCTED ON BIODEGRADABILITY OF TOXIC AND/OR HAZARDOUS ORGANIC PRIORITY POLLUTANT COMPOUNDS. THE STUDIES HAVE PROJUCED A LIODEGRADATION TESTING PROTOCOL TO PROVIDE A SCIENTFIC BASIS FOR PREDICTING THE FATE OF THESE COMPOUNDS IN TYPICAL ACTIVATED SLUDGE TREATMENT PLANTS THAT EMPLOY ANAER IC DIGESTION AS A METHOD OF SOLIDS STABILIZATION. THE BIGDEGRADATION PROTOCOL INCLUDES A THREF-LEVEL APPROACH FOR AEROBIC STUDIES. LEVEL 1—ACCLIMATION AND ABIOTIC REMOVAL; LEVEL 2—BIODEGRADATION KINETICS; AND LEVEL 3—EXTENT OF BIODEGRADATION. A TWO-LEVEL ANAEPOBIC APPROACH, CONSISTING OF LEVEL 1 AND LEVEL 2 AND OPERATIONAL PERFORMANCE, WAS LSO TESTED. THE TESTING PROCEDURE FOCUSES ON THE STUDY OF (1) BIODEGRADABILITY OF SUBSTRATE INCLUDING KINETICS AND EFFLUENT QUALITY AS A FUNCTION OF SOLIDS RETENTION TIME; (2) PARTITIONING AND INTERMEDIA TRANSPORT INCLUDING VOLATILIZATION AND SORPTION; AND (3) TOXICITY TO ACTIVATE) SLUDGE SYSTEMS AND TO ANAEROBIC DIGESTION. THE REPORT DESCRIBES THE EVOLUTION OF THE BIODEGRADATION TESTING PROTOCOL FOR THE PURPOSE OF ESTABLISHING QUICK RESPONSE CAPABLLITY, THE DEVELOPMENT OF NECESSARY LABORATORY PROCEDURES, THE RESULTS OF THE APPLICATION OF THESE TESTS TO EVALUATE AND PREDICT THE FATE OF PCP IN BIOLOGICAL WASTE TREATMENT SYSTEMS.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 210, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø44

PUBLICATION DATE: FEE 86

TITLE: TOXIC AND PRIORITY OPGANICS IN MUNICIPAL SUDGE LAND PREATMENT SYSTEMS.

PERSONAL AUTHOR: OVERCASH, MICHAEL R.; AND OTHERS

DESCRIPTOR: \*CHEMICALS, \*LAND TREATMENT: \*ORSANIC CHEMICALS: \*UFBANIC COMPOUNDS: \*POLLUTANTS: \*PESEARCH REPORTS: \*SUIGE: \*TOXIC SUBSTANCES, \*WASTE DISCOSAL. \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 150P. PRICE: \$10

ABSTRACT. THE GOAL OF THE REGEAPCH REPORTED HEREIN WAS TO PEGIN A METHODICAL INVESTIGATION OF OPGANIC PRIORITY POLLUTANTS APPLIED TO PLANT-SOIL SYSTEMS AT RATES SYSTEMS AT PATES CHARAC ERISTIC OF MUNICIPAL STUDGE LAND TREATMENT. A SINGLE CHEMICAL WAS APPLIED AT RATES OF Ø.1. 10. AND 100-FOLD OF THE EXPECTED VALUE RECEIVED DURING AN ANNUAL APPLICATION OF MUNICIPAL SLUDGE. THE 14C-CHEMICALS INVESTIGATED WERE IN THE FOLLOWING GROUPS: POLYNUCLEAR AROMATICS. PHTHALIC ACID ESTERS. AND SUBSTITUTED AROMATIC COMPOUNDS. NONE OF THE ORGANIC PRIORITY POLLUTANTS STUDIED WAS ENTIPELY EXCLUDED FROM ALL PLANT SPECIES AT THE RATES OF SOIL APPLICATION UTILIZED. THE RATIO OF VEGETATION FRESH WEIGHT CONCENTRATION OF A CHEMICAL TO THE CONCENTRATION LOADED INITIALLY ONTO THE SOIL (BIOACCUMULATION) WAS MOST TYPĪCALLY LESS THAN Ø Ø1 AND ALWAYS LESS THAM 1.0. OF THE GROPS STUDIED (FESCUE, COPN. SOYBEANS. WHEAT). NO VEGETATION TYPE WAS POUTINELY THE SPECIES EVIDENCING THE HIGHEST UPTAKE OF THE ORGANIC CHEMICALS USED. PLANT UPTAKE APPEARS TO BE LAPGELY GOVERNED BY THE LOSSES OVER TIME FROM THE SOIL AND THE WATER SOLUBILITY OF A GIVEN CHEMICAL. THE PRESENCE OF SLUDGE DID NOT APPEAR TO SIGNIFICANTLY ALTER THE CROP UPTAKE OR SOIL LOSS OF THESE COMPOUNDS. IF CORROBORATED. THIS INFORMATION WOULD ALLOW A LARGE EXPANSION OF DESIGN INFORMATION BASED ON AVAILABLE LITERATURE INFORMATION.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER. 1200 CHAMBERS R AD. ROOM 310. COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø45

PUBLICATION DATE: FEB 86

TITLE: STATUS OF POROUS BIOMASS SUPPORT SYSTEMS FOR WASTEWATER TREATMENT: AN INNOVATIVE/ALTERNATIVE TECHNOLOGY ASSESSMENT.

PERSONAL AUTHOR: BOYLE, WILLIAM C.: WALLACE ALFRED T.

DESCRIPTOR: \*ALTERNATIVE TECHNOLOGY: AERATION PASINS: EQUIPMENT: \*FACILITIES: \*PERFORMANCE EVALUATION: \*FORMUS BIOMASS SUPPORT SYSTEMS: \*SITE VISITS. \*SUPPORT SYSTEMS: \*SITE VISITS. \*SUPPORT TREATMENT

DESCRIPTIVE NOTE: 105P. PRICE: \$7.90

ABSTRACT: A STUDY WAS CONDUCTED TO ASSESS THE EMERGING

WASTEWATER TREATMENT TECHNOLOGY OF POROUS BIOMASS SUPPORT SYSTEMS (PBSS). THESE SYSTEMS USE LARGE NUMBERS OF SMALL, OPEN-CELL OR RETICULATED POLYURETHANE FOAM PADS TO SUPPORT HIGH CONCENTRATIONS OF BIOMASS IN AN AERATION BASIN. THE TECHNOLOGY IS BEING MARKETED BY SIMON-HARTLEY LTD. IN ENGLAND (CAPTOR) AND LINDE AG (LINPOR) IN WEST GERMANY. VISITS WERE MADE TO LABORATORIES OF THE ORIGINAL PROCESS DEVELOPERS IN THE UNITED KINGDOM AND IN WEST GERMANY. DATA WERE GATHERED THROUGH INTERVIEWS WITH ACAL MIC AND COMMERCIAL INVESTIGATORS IN BOTH COUNTRIES AND THROUGH A REVIEW OF ALL AVAILABLE LITERATURE AND DATA, BOTH PUBLISHED AND UNPUBLISHED. THE STUDY CONCLUDED THAT PBSS TECHNOLOGY, BUT THAT THE TECHNOLOGY OFFERS SOME ATTRACTIVE POTENTIAL BENEFITS AND VERY LITTLE RISK FOR SOME INTENDED APPLICATIONS. THOROUGH PILOT PLANT AND FULL-JCALE STUDIES ARE NEEDED TO ANSWER MANY REMAINING QUESTIONS ABOUT THE PROCESS AND TO PROVIDE DESIGN DATA AND GUIDANCE.

AVAILABILITY: ENVIRON'ENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø4F

PUBLICATION DATE: FEB 86

TITLE: STATUS OF POROUS BIOMASS SUB ORT SYSTEMS FOR WASTEWATER TREATMENT: AN INNOVATIVE/ALTLENATIVE TECHNOLOGY ASSESSMENT.

PERSONAL AUTHOR: BOYLE, WILLIAM C.: WALLACE ALFRED T.

DESCRIPTOR: \*ALTERNATIVE TECHNOLOGY: AERATION BASINS: \*EQUIPMENT: \*FACILITIES: \*PEPFORMANCE EVALUATION: \*POROUS BIOMASS SUPPORT SYSTEMS: \*SITE VISITS: \*SURVEYS: \*TEC\*\*NOLOGY: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 105P. PRICE: \$7.90

AVAILABILITY: ENVIRONMENTAL GUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROCM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø46

PUBLICATION DATE: FEB 86

TITLE: ROTATING BIOLOGICAL CONTACTORS-HYDRAULIC VERSUS ORGANIC LOADING.

DESCRIPTOR: \*BIOLOGICAL CONTACTORS; EQUIPMENT; FACILITIES; \*HYDRAULIC LOADING; \*PERFORMANCE EVALUATION; \*OPERATIONS (WASTEWATER); \*ORGANIC LOADING; RESEARCH REPORTS, \*ROTATING BIOLOGICAL CONTACTORS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 128P. PRICE: \$8.68

ABSTRACT: CONVENTIONAL AND ALTERNATIVE FLOW CONFIGURATIONS OF ROTATING BIOLOGICAL CONTACTORS WERE COMPARED FOR SOLUBLE ORGANIC CARBON AND AMMONIA-NITROGEN REMOVAL. AFTER TREATMENT BY 400000 SQUARE FT. \_F SURFACE AREA, THE HYDRAULIC BAY HAD

SCLUPLE CBOD CONCENTRATIONS THAT WERE LOWER THAN THOSE IN THE ORGANIC BAY IN THE PARALLEL FLOW EXPERIMENTS. ABOVE 400000 SQUARE FT. NO STATISTICALLY SIGNIFICANT DIFFERENCE OCCURRED IN SOUBLE CBOD CONCENTRATIONS. AMMONIA-NITROGEN CONCENTRATIONS WERE LOWER JN THE HYDRAULIC BAY AFTER 400000 AND 6000000 SQUARE FT. OF TREATMENT AREA. THERE WAS NO STATISTICAL DIFFERENCE IN AMMONIA-NITROGEN CONCENTRATIONS ABOVE 60000000 SQUARE FT. OF TREATMENT.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø47

PUBLICATION DATE: FEB 86

TITLE: FACTORS AFFECTING COMPOSTING OF MUNICIPAL SLUDGE IN A BIOREALTOR.

PERSONAL AUTHOR: HOITINK, H. A. J.; KUTER, G. A.

DESCRIPTOR: \*BIOREACTORS; \*COMPOSTING; \*OPERATIONS (WASTEWATER); \*SEWAGE SLUDGE; \*SLUDGE; \*RECYCLING; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 112P, PRICE: \$7.72

ABSTRACT: THIS RESEARCH WAS INITIATED TO DETERMINE THE FEASIBILITY OF COMPOSTING MUNICIPAL SLUDGE IN AN AERATED TANK BIOREACTOR SYSTEM AND TO DEVELOP BASELINE DATA FOR THE RATIONAL OPERATION AND DESIGN OF ENCLOSED REACTOR COMPOSTING SYSTEMS. A VARIETY OF CONDITIONS WAS TESTED AND VARIOUS MIXTURES OF RECYCLED COMPOST, BARK, AND SAWDUST WERE USED AS BULKING AGENTS. THE MEAN TEMPERATURE OF THE COMPOST WAS REGULATED THROUGH PROGRAMMED RATES OF AIRFLOW. LOSSES OF WATER AND SOLIDS EXPERIENCED IN THIS SYSTEM WERE SIGNIFICANTLY GREATER THAN THOSE PUBLISHED FOR THE STATIC AERATED PILE SYSTEM. MEASUREMENTS OF CARBON DIOXIDE EVOLUTION APPEARED TO ACCURATELY REFLECT THE DESTRUCTION OF VOLATILE SOLIDS AND INDICATED THAT THE DESTRUCTION OF VOLATILE SOLIDS AND INDICATED THE COMPOST WAS MAINTAINED AT 38-55 C UNDER HIGH RATES OF AERATION.

AVAILABILITY: ENVIRONMENT/\_ QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø48

PUBLICATION DATE: FEB 85

TITLE: AUTOMATION OF SLUDGE PROCESSING: CONDITIONING, DEWATERING, AND INCINERATION.

PERSONAL AUTHOR: POLTA, R. C.; AND OTHERS

DESCRIPTOR: \*AUTOMATION: \*AUTOMATED CONTROLS: \*DEWATERING: \*INCINERATION: \*MINNESOTA: \*OPERATIONS (WASTEWATER): \*SLUDGE; \*SLUDGE CONDITIONING; \*WASTE DISPOSAL: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 223P. PRICE: \$14.38 ABSTRACT: THIS STUDY DEVELOPED AND TESTED AUTOMATED CONTROL STRATEGIES FOR MUNICIPAL WASTEWATER SLUDGE PROCESSING. THE CONSISTED OF CHEMICAL CONDITIONING. STRATEGIES FILTRATION AND INCINERATION. THE PROJECT WAS CONDUCTED AT THE ST. PAUL, MINNESOTA METROPOLITAN WASTE CONTROL THE ST. PAUL, MINNESOTA METROPOLITAN WASTE CONTROL COMMISSION (MWCCE SENECA FACILITY, A 24-MGD PLANT WITH PARALLEL SLUDGE PROCESSING TRAINS, SEVERAL STRATEGIES WERE DEVELOPED FOR CONTROLLING LIME AND FERRIC CHLORIDE ADDITION AND FILTER CAKE PRODUCTION RATE. EACH STRATEGY WAS EVALUATED DURING APPROXIMATELY 500 HOURS OF OPERATION. THE PERFORMANCE OF EACH STRATEGY IS SUMMARIZED FOR VARIABILITY A 1 COST.
AUTOMATED STRATEGIES WERE DEVELOPED FOR CON OLLING
INCINERATOR HEARTH TEMPERATURES AND AIR INPUT. THE WERE DEVELOPED FOR CON OLLING EMPERATURES AND AIR INPUT. THE STRATEGIES WERE DESIGNED TO MAINTAIN THE LOWEST POSSIBLE FURNACE BURNING ZONE AND MINIMIZE EXCESS AIR. THE TEST DATA SHOW SUBSTANTIAL COST REDUCTION FOR AUTOMATED CONTROL. ON-LINE SENSORS WERE USED TO COLLECT DATA AND IMPLEMENT CONTROL STRATEGIES. PERFORMANCE DATA FOR THESE SENSORS ARE SUMMARIZED. A DESCRIPTION OF THE DIGITAL DATA ACQUISITION AND CONTROL SYSTEM IS INCLUDED.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS. OH 43212

IRIS ACCESSION NUMBER: EWØ13Ø49

PUBLICATION DATE: FEB 86

TITLE: ULTRAVIOLET DISINFECTION OF WASTEWATER FROM SECONDARY EFFLUENT AND COMBINED SEWER OVERFLOWS.

PERSONAL AUTHOR: SCHEIBLE, O. KARL; AND OTHERS

DESCRIPTOR: \*DESIGN; \*DISINFECTION; \*EFFLUENT; \*MODELS; \*OPERATIONS (WASTEWATER); \*PILOT STUDIES; \*ULTRAVIOLET RADIATION; \*WASTEWATER TREATMENT; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 451P. PRICE: \$28.06

ABSTRACT: A TWO-YEAR, LARGE-SCALE PILOT INVESTIGATION WAS CONDUCTED AT NEW YORK CITY'S PORT RICHMOND WAER POLLUTION CONTROL PLANT TO DEMONSTRATE THE APPLICATION OF ULTRAVIGLET (UV) DISINFECTION TO SECONDARY EFFLUENT AND TO DETERMINE THE FEASIBILITY OF APPLYING UV TO THE DISINFECTION OF A WASTEWATER SIMILAR TO COMBINED SEWER OVERFLOW (CSO). THREE DIFFERENT SYSTEMS WERE OPERATED. THE UV PROCESS WAS VERY EFFECTIVE IN THE DISINFECTION OF SECONDARY EFFLUENT. OVERALL, THE STUDY DEMONSTRATED THAT LOG SURVIVAL RATIOS OF 3 TO -4 COULD BE ACHIEVED CONSISTENTLY AT PRACTICAL SYSTEM LOADINGS. SIMILARLY, IT WAS SHOWN THAT A LOG SURVIVAL RATIO OF UP TO -3 COULD BE ACHIEVED WITH PRIMARY EFFLUENT. THE STUDIES ALSO INDICATED THAT THE SUBMERGED QUARTZ SYSTEMS WERE MORE ENERGY EFFICIENT THAN THE TEFLON SYSTEM IN ACHIEVING DISINFECTION PERFORMANCE. A MAJOR ELEMENT OF THE PORT RICHMOND PROJECT WAS THE DEVELOPMENT OF A RATIONALLY BASED PROTOCOL FOR THE DESIGN OF THE UV DISINFECTION PROCESS. A MATHEMATICAL EXPRESSION INCORPORATING THE PRIMARY PROCESS VARIABLES WAS DEVELOPED AND APPLIED TO THE PORT RICHMOND DATA BASE. THE MODEL CORRECTLY RESPONDED TO THE VARIABLES ASSOCIATED WITH THE UV PROCESS AND WAS USED TO

DEVELOP A NUMBER OF DESIGN CURVES.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES
CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EWØ13050

PUBLICATION DATE: JUL 85

TITLE: CHESAPEAKE BAY RESTORATION AND PROTECTION PLAN - APPENDICES.

DESCRIPTOR: \*CHESAPEAKE BAY; \*ENVIRONMENT; \*MANAGEMENT.
\*NATURAL RESOURCES: \*NUTRIENTS; \*PLANNING, \*POLLUTION
CONTROL: \*TOXIC SUBSTANCES: \*WATEP POLLUTION CONTROL

DESCRIPTIVE NOTE: 403P.

ABSTRACT: THIS IS THE APPENDIX TO THE CHESAPEARE BAY RESTORATION AND PROTECTION PLAN (EW #13 #51). INCLUDED IS INFORMATION ON THE FOLLOWING TOPICS: (I'NDIRIENT IMPLEMENTATION PROGRAMS: (2) TOXIC IMPLEMENTATION PROGRAMS; (3) LIVING RESOURCES IMPLEMENTATION PROGRAM. (4) OTHER RELATED MATTERS: AND (5) INSTITUTIONAL MANAGEMENT PROGRAMS.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY. REGION III, CHESAPEAKE BAY LIAISON OFFICE. 410 SEVERN AVENUE. ANNAPOLIS, MD 21403

IRIS ACCESSION NUMBER: EWØ13Ø51

PUBLICATION DATE: SEP 85

TITLE: CHESAFEAKE BAY RESTORATION AND PROTECTION PLAN.

DESCRIPTOR: \*CHESAPEAKE BAY: \*ENVIRONMENT: \*MANAGEMENT: \*NATURAL RESOURCES; \*PLANNING; \*POLLUTION CONTROL: \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 11@P.

ABSTRACT: THIS PUBLICATION IS THE FIRST RESPONSE TO THE CHESAPEAKE BAY AGREEMENT OF 1983. THE PLAN IS STRUCTURED TO ADDRESS THE GOALS AND OBJECTIVES OF THE CHESAPEAKE BAY RESTORATION AND PROTECTION EFFORT. CHAPTER I PROV.DES A LOOK AT THE 9AY'S PRESENT STATUS AND SOME OF THE HISTORY OF THE PRESENT EFFORT TO RESTORE AND PROTECT THE BAY CHAPTER II STATES THE GOALS, OBJECTIVES. AND STRATEGIES OF FEDERAL AND STATE AGENCIES. CHAPTER III DESCRIBES THE PROBLEMS AND MANAGEMENT STRATEGIES EACH STATE WILL USE IN APPROACHING THE RESTORATION AND PROTECTION OF RIVER BASINS ENCOMPASSING CHESAPEAKE BAY. CHAPTER IV DESCRIBES WHAT THE PLANNERS HOPE TO ACCOMPLISH.

AVAILABILITY: USEPA REGION III. CHESAPEAKE BAY LIAITON OFFICE, 410 SEVERN AVE., ANNAPOLIS, MD 21403



IRIS ACCESSION NUMBER: EWØ13Ø52 PUBLICATION DATE: JAN 86

TITLE: EVOLUTION OF DRINKING WATER REGULATIONS IN THE UNITED STATES.

PERSONAL AUTHOR: KAWATA, KAZUYOSHI

DESCRIPTOR: \*DRINKING WATER: \*REGULATIONS; \*TRENDS; \*WATER QUALITY: \*WATER TREATMENT

DESCRIPTIVE NOTE: 206-09P.

AUSTRACT: DESCRIBED IS THE EVOLUTION OF DRINKING WATER REGULATIONS IN THE UNITED STATES.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH: V48 N4

IRIS ACCESSION NUMBER: EWØ13Ø53

PUBLICATION DATE: DEC 84

TITLE: PLACING WATER SUPPLY AND SEWER MAIN IN THE SAME TRENCH: EXPERIENCES DERIVED FROM A STUDY IN AMMAN, JORDAN.

PERSONAL AUTHOR: LUDWIG. H. F.

DESCRIPTOR: \*DESIGN: \*CONSTRUCTION: \*FACILITIES: \*PUBLic HEALTH: \*SEWERS: \*WATER PIPES: \*WATER SUPPLY: \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 1-46P.

ABSTRACT: REPORTED ARE THE RESULTS OF EXPERIENCES FROM A STUDY IN AMMAN. JORDAN, EVALUATING THE USE OF COMBINING THE WATER SUPPLY AND THE WATER MAINS IN THE SAME TRENCH.

AVAILABILITY: ENVIRONMENTAL SANITATION REVIEWS: NIS

IRIS ACCESSION NUMBER: EWØ13654

PUBLICATION DATE. JUN 85

TITLE: ADVANCES IN COLIFORM METHODOLOGY.

PERSONAL AUTHOR: LECHAVALLIER, MARK W.; MCFE, ERS, GUPDON A.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES: \*COLIFORMS: \*LABORATORY PROCEDURES: \*MEMBRANE FILTER TECHNIQUE: \*MULTIPLE TUBE FERMENTATION: \*PERFORMANCE EVALUATION: \*WATER TREATMENT

DESCRIPTIVE NOTE: 4-6P.

ABSTRACT: PRESENTED IS INFORMATIO' ON ADVANCES IN THE MEMBRANE FILTER TECHNIQUE AND ON THE MULTIPLE TUBE FERMENTATION (MPN) TECHNIQUE FOR DETERMINING THE PRESENCE OF COLIFORMS.

AVAILABILITY: BENCH SHEET. V7 N3

IRIS ACCESSION NUMBER: EWØ13055 PUBLICATION DATE: JUN 85

TITLE: WATERBORNE DISEASES.

PERSONAL AUTHOR: FOSTER, LAWRENCE

DESCRIPTOR: \*DISEASES: \*DRINKING WATER: \*HEALTH: \*PUBLIC HEALTH: \*WATER TREATMENT

DESCRIPTIVE NOTE: 6-7+.

ABSTRACT: DESCRIBED ARE DISEASES THAT MAY BE SPREAD BY DRINKING WATER.

AVAILABILITY: BENCHSHEET: V7 N3

IRIS ACCESSION NUMBER: EWØ13Ø56

PUBLICATION DATE: FEB 86

TITLE: THE NEW GAME OF MOTIVATION.

PERSONAL AUTHOR: MICHAELS, MARK

\*PERSONNEL: DESCRIPTOR: \*MANAGEMENT; \*MOTIVATION: \*PRODUCTIVITY

DESCRIPTIVE NOTE: 36-38, 42, 44P.

ABSTRACT: DESCRIBED ARE A VARIETY OF PROGRAMS AND TECHNIQUES FOR INCREASING EMPLOYEE MOTIVATION.

AVAILABILITY: AMERICAN CITY AND COUNTY: VIØ1 N2

IRIS ACCESSION NUMBER: EWG13657

PUBLICATION DATE: FEB 86

TITLE SAFETY UNDER THE STREETS.

PERSONAL AUTHOR: ZICKEFOOSE, CHARLES S.

DESCRIPTOR: \*ACCIDENT PREVENTION: DISEASES: \*SAFETY PROGRAMS: \*OCCUPATIONAL SAFETY: MAMHOLES; \*MANAGEMENT; \*OPERATIONS (WASTEWATER); \*SAFETY; SEWERS; \*VAS(EWATER) **TREATMENT** 

DESCRIPTIVE NOTE: 48-50P.

ABSTRACT: DESCRIBED ARE PROCEDURES AND POLICIES FOR INCREASING SAFETY AND PREVENTING ACCIDENTS IN WASTEWATER SYSTEMS.

AVAILABILITY: AMERICAN CITY AND COUNTY; V1Ø1 N2

IRIS ACCESSION NUMBER: EWØ13Ø58

PUBLICATION DATE: FEB 86

TITLE: ASSESS STRATEGIC ELEMENTS FOR WASTEWATER FINANCING.

PERSONAL AUTHOR: MACKENZIE, DAVID: BELLUSH, SANDRA MOKUVOS

DE'CRIPTOR: BONDS: DEBT: \*FACILITIES: \*FINANCING: CONTRACTING: PRIVATIZATION: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 60, 62, 64P.

ABSTRACT: DESCRIBED ARE VARIOUS WAYS OF FINANCING WASTEWATER FACILITIES.

AVAILABILITY: AMERICAN CITY AND COUNTY: V101 N2

IRIS ACCESSION NUMBER: EWØ13Ø59

PUBLICATION DATE: NOV 85

TITLE: CHEMICAL INDUSTRY: GOVERNMENT REGULATIONS. 1976 - NOVEMBER 1985 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGR.PHIES: \*CHEMICAL INDUSTRY: \*CHEMICALS; FEDERAL ROLE: \*REGUL-TIONS: \*POLLUTION CONTROL: WASTE DISPOSAL

D\_\_CRIPTIVE NOTE: 114P. PRICE CODE: PC NØ1/MFNØ1. ORDER NO.; PB85-871838/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE IMPLEMENTATION AND EFFECTS OF GOVERNMENT REGULATION ON THE CHEMICAL INDUSTRY. INDUSTRIAL POLLUTION SOURCES AND REGULATIONS. TOXIC CHEMICALS CONTROL, AND WASTE TRANSPORTATION REGULATIONS ARE DISCUSSED. ENERGY SOURCE DEVELOPMENT AND REGULATIONS, AND REGULATION EFFECTS CM PLANT DESIGN AND PRODUCTIVITY ARE ALSO INCLUDED. (THIS PDATED BIBLIOGRAPHY CONTAINS 121 CITATIONS, 28 OF WHICH RE NEW ENTRIES TO THE PREVIOUS FOITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø6Ø

PUBLICATION DATE: NC. 85

TITLE: CHROMATOGRAPHY FOR POLLUTION AND TOXICOLOGICAL ANALYSIS. 1983-NOVEMBER 1985 (CITATIONS FROM THE NTI3 DATA BASE).

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*ANNOTATED BIBLICGRAFHIES: BIBLIOGRAPHIES: \*CHROMATOGRAPHY: \*LABORATORY PROCEDURES: \*POLLUTION CONTROL: \*TOXICOLOGY: WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 206P. PRICE CODE: PC N01/MFN01. ORDER NO.: PB85-872661/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING RESEARCH AND DEVELOPMENT OF CHROMATOGRAPHIC ABSOPPTION PROCESSES FOR ANALYSIS OF POLLUTION AND TOXINS FROM INDUSTRY. ADSORPTION OF COMPOUNDS IN AN ASCENDING MOLECULAR WEIGHT ORDER ONTO SUCH ADSORBENT MATERIALS AS ACTIVATED CARBON, ALUMINA. OR SILICA GEL IS DISCUSSED WITH PEFFERCE TO PEPFORMANCE AND APPLICATIONS. VARIOUS AIR AND WATER POLLUTANTS. WASTES AND TOXIC MATERIALS ARE DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 198 CITATIONS, 48 OF J. CHARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 POPT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13#61

PUBLICATION DATE. NOV 85

TITLE: CHEMICAL INDUSTRY: GOVERNMENT REGULATIONS. 1970-NOVEMBER 1985 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES: \*CHEMICALS: ECONOMICS: \*CHEMICAL INDUSTRY: \*INDUSTRIAL WASTED, EMISSIONS; \*POLLUTION CONTPOL, PEGULATIONS, TOXIC BUBSTANCES: WASTE DISPOSAL

DESCRIPTIVE NOTE: 156P. PRICE CODE: PC NØ1/MFNØ1. OFDER NO.: PB85-872232/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING GOVERNMENT REGULATION EFFECTS ON THE CHEMICAL INDUSTRY. REGULATIONS PERTAINING TO INDUSTRIAL WASTES. ENERGY CONSUMPTION AND CONSERVA ION. AND INDUSTRIAL EMMISSION ARD DISCUSSED. EMISSION STANDARDS AND CONTROL. TOXIC SUBSTANCE CONTROL. AND ECONOMIC IMPACTS OF REGULATIONS AFFECTING TO CHEMICAL INDUSTRY ARE CONSIDERED. (THIS UPDATED BIBLIOGRAP CONTAINS 162 CITATIONS. 21 OF WHICH ARE NEW ENTRIES TO THE PREV.OUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: FWX13062

PUBLICATION DATE: NOV 85

TITLE: WATER QUALITY ACTS: STANDARDS, REGULATIONS, AND REACTIONS, 1978-OCTOBER 1985 (CITATIONS FOR POLLUTION ABSTRACTS).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIFLIOGRAPHIES: \*LEGISLATION: \*REGULATIONS: \*STANDARDS: \*WATER QUALITY ACTS: \*WATER QUALITY

DESCRIPTIVE NOTE: 177P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-8/2794/WEP

APSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING STANDARDS, REGULATIONS, AND PUBLIC AND SPECIAL WEEKST REACTIONS TO VARIOUS WATER QUARTER ACTS OR LAW TECHNICAL.

ENVIRONMENTAL, ECONOMIC, AND POLITICAL ASPECTS OF THESE LAWS ARE CONSIDERED. ATTENTION IS ALSO GIVEN TO METHODS AND PROBLEMS OF IMPLEMENTATION AND ENFORCEMENT. (THIS UPDATED BIBLIOGRAPHY CONTAINS 283 CITATIONS, 11 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD. SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø63

PUBLICATION DATE: NOV B5

TITLE: PLASTIC AND ELASTOMERS; OFFSHORE APPLICATIONS. 1973-NOVEMBER 1985 (CITATIONS FROM THE RUBBER AND PLASTICS RESFARCH ASSOC DATA BAS

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES: \*ELASTOMERS: \*PLASTICS: \*OIL SPILLS: \*OIL RECOVERY: \*POLLUTION CONTROL: TECHNOLOGY: \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 190P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-872406/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE UTILIZATION OF PLASTIC AND ELASTOMER MATERIALS AND PRODUCTS IN SURVIVAL EQUIPMENT, ENHANCED OIL RECOVERY OPERATIONS. CORROSION RESISTANT COATINGS. AND OIL SPILL RECOVERY TECHNIQUES. GLASS REINFORCED PLASTICS, POLYMETHYL METHACRYLATES, ACRYLIC RESINS. TEFLONS. POLYETHYLENES. POLYPROPYLENES. AND NYLONS ARE A JONG MATERIALS DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 320 CITATIONS, BB OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø64

PUBLICATION DATE: NOV 85

TITLE: ASBESTOS IN DRINKING WATER. 1977-NOVEMBER 198K (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: \*ASBESTOS: BIBLIOGRAPHIES: \*DRINKING WATER: DETECTION; POLLUTION CONTROL: \*PUBLIC HEALTH

DESCRIPTIVE NOTE: 126P. PRICE CODE: PC NG./MF NØ1. ORDER NO.: PB85-B72Ø75/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE OCCURRENCE, AND PROBLEMS ASSOCIATED WITH ASBESTOS FIBER CONTAMINATED DRINKING WATER. THE ROLE OF ASBESTOS CEMENT PIPES AND FACTORS INVOLVED IN THE RELEASE OF ASBESTOS FIBERS ARE DISCUSSED. DISTRIBUTION DATA, EPIDEMIOLOGY STUDIES. AND HEALTH EFFECTS ARE CONSIDERED. DETECTION AND MEASUREMENT METHODS ARE ALSO DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 11B CITATIONS, 20 OF WHICH ARE NEW ENTRIES TO THE

PREVIOUS EDITION.)

AVAIL BILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROAD. SPRINGFIELD. VA 22161

IRIS ACCESSION NUMBER: EWØ13065

PUBLICATION DATE: NOV B5

TITLE: OIL SPILL REMOVAL TECHNIQUES AND EQUIPMENT. 1974-OCTOBER 1985 (CITATIONS FROM OCEANIC ABSTRACTS).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; \*EQUIPMENT; ENVIRONMENTAL IMPACT; \*OIL SPILLS; \*POLLUTION

DESCRIPTIVE NOTE: 200P. PRICE CODE: PC N01/MF N01. ORDER NO.: PBB5-B71416/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING EQUIPMENT AND TECHNIQUES FOR CONTROL, DISPERSION, AND DISPOSAL OF OIL SPILLS. TOPICS INCLUDE CHEMICAL DISPERSANTS AND MECHANICAL SKIMMERS. EMPHASIZED ARE HARBORS, ESTUARIES, AND THE RESULTING IMPACT ON WATER BIRDS AND MARINE LIFE. (THIS UPDATED BIBLIOGRAPHY CONTAINS 327 CITATIONS. 19 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 52B5 PORT ROYAL ROAD, SPRINGFIELD. VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø66

PUBLICATION DATE: NOV B5

TITLE: TOXICITY OF AROMATIC POLYCYCLIC HYDROCARBONS. 1978-NOVEMBER 1985 (CITATIONS FROM THE LIFE SCIENCES COLLECTION DATA BASE).

DESCRIPTOR: BIOCHEMISTRY: \*AROMATIC POLYCYCLIC HYDROCARBONS: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES: \*HYDROCARBONS: HEALTH; \*ORGANIC COMPOUNDS: \*TOXIC SUBSTANCES: \*RESEARCH REPORTS

DESCRIPTIVE NOTE: 198P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PBB6-85Ø468/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE TOXICITY AND BIOCHEMICAL EFFECTS OF AROMATIC POLYCYCLIC HYDROCARBONS. TOPICS INCLUDE EFFECTS ON METABOLISM AND LIVER ACTIVITY, CELLULAR RESPONS'S, BINDING CHARACTERISTICS, AND THE OCCURRENCE AND PATH OF THE COMPOUNDS IN FOGD CHAINS. BIOACCUMULATION STUDIES IN SPECIFIC AREAS. AND ISOLATION AND DETECTION TECHN QUES ARE ALSO CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 233 CITATIONS, 93 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 52B5 PORT ROYAL ROAD, SPRINGFIELD, VA 22161



IRIS ACCESSION NUMBER: EWØ13067 PUBLICATION DATE: NOV 85

TITLE: ION EXCHANGE RESINS. OCTOBER 1983-NOVEMBER 1985 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES: \*ION EXCHANGE RESINS; RESOURCE RECOVERY; RESINS; \*RESEARCH REPORTS; WATER TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 112P. PRICE CODE; PC NØ1/MF NØ1. ORDER NO.: PB86-850690/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING PREPARATION, PROPERTIES, AND APPLICATIONS OF ION EXCHANGE RESINS. APPLICATIONS INCLUDE WATER AND WASTE TREATMENT; CHEMICAL RECOVERY, SEPARATION, PURIFICATION, AND CATALYSIS; DESALINATION; AND ORE TRATMENT AND RECOVERY. REGENERATION AND DISPOSAL OF ION EXCHANGE RESINS ARE ALSO COVERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 137 CITATIONS, 57 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13668

PUBLICATION CATE: SEP 85

TITLE: POINT-UF-USE REDUCTION OF VOLATILE HALOGENATED ORGANICS IN DRINKING WATER,

PERSONAL AUTHOR: BELLEN, G.: AND OTHERS

DESCRIPTOR: \*CHEMICALS; \*DRINKING WATER; \*CONTAMINATION; \*COSTS; \*MAINTENALCE; \*MONITORING; \*ORGANIC CHEMICALS; \*POINT-OF-USE-]REATMENT; \*WATER TREATMENT

DESCRIPTIVE NOTE: 87P. PRICE CODE: PC AØ5/MF AØ1 ORDER NO.: P386-1Ø7711/WEP

ABSTRACT: CONTAMINATION OF DRINKING WATER BY CRGANIC CHEMICALS HAS BECOME A NATIONAL PROBLEM OF INCREASING CONCERN. SMALL COMMUNITIES FACED WITH THE PROBLEM OF REMOVING THESE CONTAMINANTS HAVE LIMITED RESOURCES AND OFTEN CANNOT AFFORD TRADITIONAL TREATMENT APPROACHES. ONE APPROACH WHICH HAS THE POTENTIAL TO BE COST EFFECTIVE IS TREATMENT AT THE HOME, OR POINT-OF-USE TREATMENT, THIS REPORT DISCUSSES THE RESULTS OF A STUDY OF POINT-OF-USE TREATMENT OF CONTAMINATED GROUND WATER IN TWO SMALL COMMUNITIES. COSTS FOR PURCHASE, INSTALLATION, MONITORING, AND MAINTENANCE ARE DOCUMENTED AND DISCUSSED. THE EFFECT OF THE POINT-OF-USE TREATMENT ON THE DRINKING WATER QUALITY IS PRESENTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPFINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø69 PUBLICATION DATE: SEP 85

TITLE: MANAGEMENT OF POINT-OF-USE DRINKING WATER TREATMENT SYSTEMS.

PERSONAL AUTHOR: BELLEN, G.: AND OTHERS

DESCRIPTOR: COMPLIANCE: \*DRINKING WATER; MAINTENANCF; \*MANAGEMENT; MONITORING: \*POINT-OF-USE TREATMENT: PUBLIC HEALTH: \*RURAL AREAS: \*WATER TREATMENT

DESCRIPTIVE NOTE: 82P. PRICE CODE: PC AØ5/MF AØ1. ORDER NO.: PB86-1Ø5285/WEP

ABSTRACT: ONE ALTERNATIVE SOLUTION TO DRINKING WATER CONTAMINATION PROBLEMS WHICH HAS RECEIVED MORE ATTENTION IN RECENT YEARS IS TREATMENT OF CONTAMINATED WATER AT THE HOME, OR POINT-OF-USE. WHILE POINT-OF-USE TREATMENT MAY PROVIDE A COST EFFECTIVE SOLUTION TO DRINKING WATER CONTAMINATION, ESPECIALLY IN SMALL COMMUNITIES, THE LOSS OF CENTRAL CONTROL OF THE TREATMENT PROCESS NECESSITATES A SOUND PROGRAM FOR MANAGING TREATMENT DEVICES. THIS DOCUMENT DISCUSSES STEPS WHICH SMALL COMUNITIES SHOULD CONSIDER TO IMPLEMENT PROPER INSTALLATION AND ONGOING MONITORING AND MAINTENANCE OF POINT-OF-USE TREATMENT DEVICES TO ASSURE PUBLIC HEALTH AND COMPLIANCE WITH APPLICABLE DRINKING WATER REGULATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø7Ø

PUBLICATION DATE: OCT 85

TITLE: EYE SAFETY: IRRITANTS, EXPOSURE EFFECTS, AND PROTECTIVE DEVICES. 1976-OCTOBER 1985 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: \*ACCIDENT PREVENTION: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES; \*EYE SAFETY; \*HEALTH; \*SAFETY

DESCRIPTIVE NOTE: 201P. PRICE CODE: PC N01/MF N01. ORDER NO.: PB85-869345/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING EYE SAFETY HAZARDS AND RECOMMENDED PROTECTIVE DIVICES FOR VARIOUS VISION JEOPARDIZING WORK CONDITIONS. WELDING PROCESSES, SULVENT REFINED COAL, COAL DUST, COAL MINING NON-IONIZING RADIATION, LASER RADIATION, NUCLEAR FLASHBLINDNESS, AMMONIA TOXICITY, LEAD OCCUPATIONAL EXPOSIBE. SOLAR RADIATION, AND CARBON DISULFIDE ARE AMONG CONDITIONS AND MATERIALS DISCUSSED RELATIVE TO EYE IRRITANTS. PROTECTIVE EQUIPMENT, PERFORMANCE EVALUATIONS, AND EFFECTS OF PROLONGED UNPROTECTED EXPOSURE TO EYE IRRITANTS ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 25% CITATIONS. 54 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE. 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø71 PUBLICATION DATE: OCT 85

TITLE. PREVENTIVE MEDICINE: HAZARDOUS MATERIALS EXPOSURE AND PUBLIC HEALTH. 1976-OCTOBER 1985 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES: \*HAZARDOUS MATERIALS: \*PREVENTIVE MEDICINE; \*PUBLIC HEALTH

DESCRIPTIVE NOTE: 255P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-869378/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING MEDICAL CRITERIA, MEASURES, AND PROCEDURES UTILIZED IN THE PROTECTION OF HUMAN POPULATIONS FROM A VARIETY OF HEALTH HAZARDS. RISKS DUE TO CASUAL, THERAPEUTIC, OCCUPATIONAL, OR WARTIME EXPOSURE TO HAZARDOUS MATERIALS AND ATMOSPHERES IN THE MEDICAL, INDUSTRIAL, AND NATURAL ENVIRONMENTS ARE DISCUSSED. THE ENERGY AND HEALTH CARE INDUSTRIES ARE EMPHASIZED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 325 CITATIONS, 45 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø72

PUBLICATION DATE: AUG 85

TITLE: DETECTION AND SIGNIFINANCE OF PATHOGENS IN SLUDGE.

PERSONAL AUTHOR: VENOSA. A. D.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES: \*BACTERIA: \*LITERATURE REVIEWS: LABORATORY PROCEDURES: \*PATHOGENS: \*SLUDGE; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 18P. PRICE CODE: PC AØ2/MF AØ1. ORDER NO.: PB85-245991/WEP

ABSTRACT: THE PAPER IS A BRIEF LITERATURE REVIEW OF THE OCCURRENCE, DISTRIBUTION, AND DENSITIES OF BACTERIAL INDICATORS IN RAW AND TREATED SLUDGES. IT DISCUSSES DETECTION METHODOLOGY AND POINTS OUT THE SERIOUS NEEDS FOR IMPROVEMENT IN SUCH METHODOLOGY. IT ALSO BRIEFLY ADDRESSES THE PUBLIC HEALTH SIGNIFICANCE OF NUMBERS REPORTED IN THE LITERATURE VIS+A-VIS THE METHODS USED TO DETECT THE ORGANISMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø73

PUBLICATION DATE: OCT 85

TITLE: WASTEWATER TREATMENT: CHEMICAL INDUSTRY. 1970-

OCTOBER 1985 (CITATIONS FROM POLLUTION ABSTRACTS).
DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES;
\*CHEMICALS: \*CHEMICAL INDUSTRY: \*POLLUTION CONTROL;
\*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 149P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-87Ø145/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING WASTEWATER TREATMENT IN THE CHEMICAL INDUSTRY RELATIVE TO A WIDE VARIETY OF INDUSTRIAL POLLUTANTS. BIOLOGICAL TREATMENTS INCLUDING CARBON ADDITIVES ARE DESCRIBED RELATIVE TO EFFECTIVENESS. THE REMOVAL OF MERCURY AND ITS COMPOUNDS ARE INCLUDED, AS WELL AS ASSOCIATED PROBLEMS AND RECOMMENDATIONS FROM FERTILIZER AND PESTICIDE POLLUTION. (THIS UPDATED BIBLIOGRAPHY CONTAINS 224 CITATIONS, 18 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SEPVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø74

PUBLICATION DATE: OCT 85

TITLE: SOIL SALINITY: IRRIGATION PRACTICES AND EFFECTS ON CROPS AND GROUNDWATER. 1977-OCTOBER 1985 (CITATIONS FROM THE SELECTED WATER RE

DESCRIPTOR: \*AGRICULTURE: \*ANNOTATED BIBLIOGRAPHICS; BIBLIOGRAPHIES: \*SALINITY; \*SOILS: \*GROUNDWATER; \*IRRIGATION: \*WATER QUALITY

DESCRIPTIVE NOTE: 131P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-869667/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE EFFECTS ON CROPS AND GROUNDWATER FROM SALINE IRRIGATION WATERS. THE SALT TOLERANCE OF CROPS, INCLUDING BEANS, GRAINS, AND CITRUS FRUITS, ARE EXAMINED. SOIL AND GROUNDWATER SALINITY, AND SURFACE WATER SALINITY APE DISCUSSED, AND THE SOURCES OF BRACKISH WATERS ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 13% CITATIONS, 12 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø75

PUBLICATION DATE: 84

TITLE: UNDERSTANDING SEWAGE TREATMENT AND DISPOSAL.

PERSONAL AUTHOR: STONEROOK, H.

DESCRIPTOR: \*POLLUTION CONTROL; \*PUBLIC HEALTH; \*SEWAGE; \*SEWAGE TREATMENT; \*WASTE DISPOSAL: \*WASTEWATER TREATMENT;

\*WASTE COLLECTION; \*WORLD PROBLEMS; \*WORLD RESOURCES

DESCRIPTIVE NOTE: 26P. PRICE CODE: PC EØ2/MF AØ1. ORDER NO.: PB85-24854Ø/WEP

ABSTRACT: THE TREATMENT AND DISPOSAL OF DOMESTIC WASTES--SEWAGE--IS BECOMING MORE AND MORE IMPORTANT AS EVER-INCREASING RURAL POPULATIONS AND URBANIZATION THREATEN EXISTING POTABLE WATER SUPPLIES IN MANY AREAS OF THE WORLD. HEALTH PROBLEMS AND DISEASES ARE OFTEN RELATED TO INADEQUATE SEWAGE TREATMENT. POLLUTION OF RIVERS AND LAKES RESULTS IN FISH KILLS AND DESTRUCTION OF OTHER FORMS OF AQUATIC LIFE. PROPER COLLECTION, TREATMENT, AND DISPOSAL OF SEWAGE IS NECESSARY TO PROMOTE HEALTHFUL CONDITIONS AND MAINTAIN THE QUALITY OF THE WORLD'S WATER RESOURCES. (COPYRIGHT (C) VOLUNTEERS IN TECHNICAL ASSISTANCE, INC., 1984.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø76

PUBLICATION DATE: 84

TITLE: UNDERSTANDING AGRICULTURAL WASTE RECYCLING.

PERSONAL AUTHOR: ESHENAUR, W.

DESCRIPTOR: \*AGRICULTURAL WASTES; \*INDUSTRIAL WASTES; \*RECYCLING; \*RESOURCES RECOVERY; \*WASTES: \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 21P. PRICE CODE: PC EØ2/MF AØ1. ORDER NO.: PB95-248367/WEP

ABSTRACT: AGRICULTURE IS THE MOST IMPORTANT DIRECT SOURCE OF LIVELIHOOD AND THE LARGEST SOURCE OF EMPLOYMENT IN THE WORLD'S LESS DEVELOPED COUNTRIES. THE AGRICULTURE SECTOR PRODUCES FOOD CROPS, MEAT AND OTHER ANIMAL PRODUCTS. ENERGY CROPS, AND INLISTRIAL CROPS. IT ALSO PRODUCES BILLIONS OF TONS OF OTHER MATERIALS LONG REGARDED AS 'WASTE'. THE MAIN TYPES OF AGRICULTUREAL WASTE ARE CROP RESIDUES, THE PARTS OF CROP PLANTS THAT ARE NOT EATEN, AND FARM ANIMAL WASTE PRODUCTS. IN THE PAST, THE VAST MAJORITY OF THESE MATERIALS WAS INDEED WASTED. AGRICULTURAL EXPERTS ARE COMING TO RECOGNIZE THAT AGRICULTURAL RESIDUES CAN PE THOUGHT OF AS A 'RESOURCE OUT OF PLACE' INSTEAD OF SIMPLY WASTE OR BY-PRODUCTS. (COPYRIGHT (C) VOLUNTEERS IN TECHNICA' ASSISTANCE. INC., 1984.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 21161

IRIS ACCESSION NUMBER: EWØ13Ø77

PUBLICATION DATE: AUG 85

TITLE: DESIGN AND OPERATION OF BELT FILTER PRESSES.

PERSONAL AUTHOR: WALSH, T. K.; AND OTHERS

DESCRIPTOR: \*BELT FILTER PRESSES; \*DESIGN: \*DEWATERING; \*OPERATIONS (WASTEWATER); \*SLUDGE: \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 13P. PRICE CODE: PC A02/MF A01. ORDER NO.: PB85-246015/WEP

ABSTRACT: BECAUSE EARLY MODELS OF BELT FILTER PRESSES (DEVELOPED FROM TECHNOLOGY ASSOCIATED WITH THE MANUFACTURE OF PAPER) PERFORMED POORLY, IMPROVED DESIGN AND OPERATION PROCEDURES FOR THESE PRESSES WERE STUDIED. BELT FILTER PRESSES FORM PART OF A SLUDGE DEWATERING SYSTEM, AND IN TERMS OF INTEGRATION WITHIN THE OVEI ALL TREATMENT PROCESS, THEIR PERFORMANCE VARIES DIRECTLY WITH THE SOLIDS CONCENTRATION OF THE FEED SLUDGE. OVERALL PERFORMANCE CAN BE IMPROVED IF FLUCTUATIONS IN THE QUA'ITY AND CHARACTER OF THE FEED SLUDGE ARE MINIMIZED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø78

PUBLICATION DATE: OCT 85

TITLE: DEEP WELL DISPOSAL. 1976-OCTOBER 1985 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES: \*DEEP WELLS: ENVIRONMENT: \*POLLUTION CONTROL; \*WASTE DISPOSAL; WELLS: REGULATIONS; RISK ANALYSIS

DESCRIPTIVE NOTE: 218P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-869816/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING DEEP WELL DISPOSAL TECHNOLOGY, INCLUDING DEEP GEOLOGIC, DEEP ROCK, AND DEEP SHAFT REPOSITORIES. WASTE DISPOSALS TREATED ARE RADIOACTIVE, CHEMICAL, AND GEOPRESSURED. REGULATIONS, ENVIRONMENTAL PROTECTION, RISK AND SAFETY ANALYSIS. FLUID AND RADIONUCLIDE MIGRATION ARE DISCUSSED. RESEAPCH WORK ON MICROBIAL DECOMPOSITION OF ORGANIC WASTE IN DEEP WELLS IS MENTIONED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 237 CITATIONS, 16 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø79

PUBLICATION DATE: OCT 85

TITLE: BIOMASS CONVERSION: METHANE PRODUCTION FROM INDUSTRIAL, MUNICIPAL, AND MARINE WASTES. 1978-OCTOBER 1985 (CITATION FROM THE ENERGY

DESCRIPTOR: \*ANAEROBIC DIGESTION: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES: \*BIOMASS CONVERSION; \*DIGESTERS; \*INDUSTRIAL WASTES; \*MARINE WASTES; \*METHANE; \*MUNICIPAL WASTES; \*PERFORMANCE EVALUATION: \*RESOURCE

RECOVERY: \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 111P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-869139/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING RESEARCH, DEVELOPMENT, AND APPLICATIONS OF METHANE PRODUCTION TECHNOLOGY BY BIOMASS CONVERSION PROCESSING OF INDUSTRIAL, MUNICIPAL, AND MARINE WASTES. METHANE PRODUCTION TECHNIQUES FROM ORGAVIC WASTES BY ANAEROBIC DIGESTION ARE EVALUATED AND TESTED. DIGESTERS DESIGN. DIGESTER EVALUATION AND EFFECTS OF ENVIRONMENTAL CONDITIONS ON DIGESTION PROCESSES ARE PRESENTED. METHANE PRODUCTION FROM AGRICULTURAL WASTES IS INCLUDED IN ANOTHER BIBLIOGRAPHY. (THIS UPDATED BIBLIOGRAPHY CONTAINS 128 CITATIONS. 29 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø8Ø

PUBLICATION DATE: 84

TITLE: UNDERSTANDING SCRAP METAL RECYCLING.

PERSONAL AUTHOR: VOGLER, J.

DESCRIPTOR: \*APPROPRIATE TECHNOLOGY: \*DEVELOPING COUNTRIES: \*METALS: \*RECYCLING: \*RESOURCE RECOVERY; \*WASTE DISTOSAL; \*TECHNOLOGY

DESCRIPTIVE NOTE: 40P. PRICE CODE: PC E02/MF A01. ORDER NO.: PB85-248326/WEP

ABSTRACT: THE PAPER IS ONE OF A SERIES PUBLISHED BY VOLUNTEERS IN TECHNICAL ASSISTANCE TO PROVIDE AN INTRODUCTION TO SPECIFIC STATE-OF-THE-ART TECHNOLOGIES OF INTEREST TO PEOPLE IN DEVELOPING COUNTRIES. THE PAPERS ARE INTENDED TO BE USED AS GUIDEI INES TO HELP PEOPLE CHOOSE TECHNOLOGIES THAT ARE SUITABLE TO THEIR SITUATIONS. (COPYRIGHT (C) VOLUNTEERS IN TECHNICAL ASSISTANCE. INC. 1984.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø81

PUBLICATION DATE: B4

TITLE: UNDERSTANDING BIOGAS GENERATION.

PERSONAL AUTHOR: MATTOCKS, R.

DESCRIPTOR: \*BIOGAS; \*ENERGY PRODUCTION: \*FUEL; \*FERTILIZER: \*ORGANIC WASTES

DESCRIPTIVE NOTE: 33P. PRICE CODE: PC E03/MF A01. ORDER NO.: PB85-248276/WEP

ABSTRACT: BIOGAS IS A BY-PRODUCT OF THE BIOLOGICAL BREAKDOWN--UNDER OXYGEN FREE CONDITIONS-OF ORGANIC WASTES SUCH AS PLANTS, CROP RESIDUES, WOOD AND BARK RESIDUES, AND HUMAN AND ANIMAL MANURE. BIOGAS GENERATORS OR DIGESTERS YIELD TWO PRODUCTS: THE BIOGAS ITSELF, AND A SEMI-SOLID BY-PRODUCT CALLED EFFLUENT OR SLUDGT. BIOGAS SYSTEMS ARE MOST POPULAR FOR THEIR ABILITY TO PRODUCE FUEL FROM PRODUCTS THAT MIGHT OTHERWISE BE WASTED-CROP RESIDUES, MANURES, ETC. THE FUEL IS A FLAMMABLE GAS SUITABLE FOR COOKING, LIGHTING, AND FUELING COMBUSTION ENGINES.

AVAILAUILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø82

PUBLICATION DATE: FE. 85

TITLE: SMALL GENERATOR DEMONSTRATION PROJECT.

DESCRIPTOR: \*DEMONSTRATION PROJECTS: \*COMPLIANCE; \*EDUCATION: \*HAZARDOUS WASTES: \*WASHINGTON; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 45P. PRICE CODE: PC AØ3/MF AØ1. ORDER NO.: PBB5-242Ø97/WEP

ABSTRACT: THE SMALL GENERATOR DEMONSTRATION PROJECT IS AN EXPERIMENTAL EFFORT TO DECREASE THE AMOUNT OF HAZARDOUS WASTE BEING MISHANDLED AND IMPROPERLY DISPOSED BY SMALL BUSINESSES IN THE SOUTH FACOMA AREA OF TACOMA, WA. THIS ONE YEAR PROJECT IS CENTERED AROUND A PROGRAM OF EDUCATION STRESSING VOLUNTARY COMPLIANCE TO INCREASE RECYCLING AND DECREASE IMPROPER WASTE DISPOSAL. THE PROJECT IS DESIGNED TO MAKE THE ALTERNATIVE WASTE HANDLING PRACTICES PRESENTED TO THE BUSINESS COMMUNITY EASY, INEXPENSIVE, AND PERMANENT BY IDENTIFYING AVAILABLE DISPOSAL RESOURCES SUCH AS LOCAL RECYCLING. 116 SMALL BUSINESSES RANGING FROM THE AUTOMOTIVE TO THE WOOD PRODUCTS INDUSTRY WERE VISITED AND NOTIFIED OF SAFE METHODS OF HANDLING AND DISPOSING OF THEIR HAZARDOUS WASTES. THIS INFORMATION RESULTED IN 40% OF THE BUSINESSES WITH WASTE HANDLING PROBLEMS CHANGING TO PROPER WASTE DISPOSAL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø83

PUBLICATION DATE: JUN 85

TITLE: GUIDANCE ON REMEDIAL INVESTIGATIONS UNDER CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT).

PERSONAL AUTHOR: COCHRAN, R.; HODGE, V.

DESCRIPTOR: CLEANUP; \*CERCLA; \*INVESTIGATIONS; \*HAZARDOUS WASTES; \*PLANNING; \*REMEDIAL INVESTIGATIONS; \*POLLUTION CONTROL; \*SITE CLEANUP; \*REGULATIONS

ERIC\*

DESCRIPTIVE NOTE: 172P. PRICE CODE: PC AØ8/MF AØ1. ORDER NO.: PB85-238616/WEP

ABSTRACT: THIS GUIDANCE DOCUMENT PROVIDES IN-DEPTH GUIDANCE ON THE CONDUCT OF REMEDIAL INVESTIGATIONS IN SUPPORT OF FEASIBILITY STUDIES UNDER SUPERFUND AND THE NATIONAL CONTINGENCY PLAN. IT DESCRIBES THE REQUIREMENTS WHICH NEED TO BE MET TO OBTAIN VALID DATA WHICH ARE NECESSARY AND SUFFICIENT TO DETERMINE WHAT RESPONSE ACTIONS, IF ANY, CAN BE CONSIDERED, EVALUATED, AND APPLIED TO MITIGATE IMPACTS ON PUBLIC HEALTH, WELFARE, AND THE ENVIRONMENT POSED BY THE REMEDIAL INVESTIGATION PROCESS AND IDENTIFIES IMPORTANT FACTORS, INFORMATION, AND ANALYSIS NEEDS TO SCOPE THE INVESTIGATION; PREPARE ALL NECESSARY PLANS (HEALTH AND SAFETY, SAMPLING, DATA MANAGEMENT); CONDUCT THE SITE ASSESSMENT; AND EVALUATE AND PRESENT RESULTS. THE GUIDANCE DOCUMENT PROVIDES GOVERNMENT AND PRIVATE PERSONNEL WITH THE MEANS TO PLAN, PREPARE, CONDUCT, AND CONCLUDE REMEDIAL INVES IGATIONS CONSISTENT WITH HAZARDOUS WASTE SITE CLEANUP LEGISLATION AND SITE SPECIFIC REQUIREMENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø84

PUBLICATION DATE: OCT 85

TITLE: ACID PRECIPITATION: EFFECTS ON AQUATIC ECOSYSTEMS. OCT 1984-SEP 1985 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: \*ACID PRECIPITATION; \*AQUATIC ECOSYSTEMS; \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; ENVIRONMENT; \*ENVIRONMENTAL IMPACT: WATER QUALITY

DESCRIPTIVE NOTE: 149P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PBB5-8697Ø9/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING ACID RAIN AND ITS EFFECT ON AQUATIC ECOSYSTEMS. PHYSIOLOGICAL AND REPRODUCTIVE EFFECTS ON FISH AND OTHER AQUATIC POPULATIONS ARE CONSIDERED. EXPOSURE PATHWAYS, FACTORS AFFECTING THE ACIDIFICATION OF LAKES AND PONDS, AND THE KNOWN AND PROJECTED CONSEQUENCES ARE DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 152 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD. SPRINGFIELD. VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø85

PUBLICATION DATE: AUG 85

TITLE: BIBLIOGRAPHY OF DOCUMENTS ISSUED BY THE GAO (GENERAL ACCOUNTING OFFICE) ON MATTERS RELATED FO: ENVIRONMENTAL PROTECTION.

DESCRIPTOR: \*BIBLIOGRAPHIES; \*ENVIRONMENT; \*ENVIRONMENTAL

PROTECTION; \*GAO, \*GENERAL ACCOUNTING OFFICE; \*POLLUTION CONTROL

DESCRIPTIVE NOTE: 154P. PRICE CODE: PC AØ8/MF AØ1. ORDER NO.: PB86-112265/WEP

ABSTRACT: THIS BIBLIOGRAPHY INCLUDES INFORMATION ON U.S. GENERAL ACCOUNTING OFFICE (GAO) DOCUMENTS DIRECTLY OR INDIRECTLY RELATED TO ENVIRONMENTAL PROTECTION RELEASED BETWEEN JANUARY 1981 AND DECEMBER 1984. ALTHOUGH THE RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION (RCED) IS GAO'S LEAD DIVISION FOR REVIEWS OF ENVIRONMENTAL PROTECTION, A BROAD INTERRELATIONSHIP EXISTS BETWEEN THE ENVIRONMENTAL AREA AND OTHER AREAS OF INTEREST ADDRESSED BY GAO SUCH AS HEALTH, ENERGY, TRANSPORTATION, AGRICULTURE. AND NATURAL RESOURCES. THE BIBLIOGRAPHY, THEREFORE, INCLUDES INFORMATION ON DOCUMENTS ISSUED BY OTHER GAO DIVISIONS AND OFFICES THAT HAVE LINKAGES TO ENVIRONMENTAL PROTECTION ISSUES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø86

PUBLICATION DATE: NOV 85

TITLE: TOXICOLOGY OF OZONE. 1970-NOVEMBER 1985 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES: \*ENVIRONMENTAL EFFECTS: \*HEALTH EFFECTS; \*OZONE; PUBLIC HEALTH: \*TOXICOLOGY

DESCRIPTIVE NOTE: 297P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB86-850559/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING LABORATORY AND FIELD INVESTIGATIONS OF THE TOXIC EFFECTS OF OZONE. TOPICS INCLUDE EFFECTS ON FORESTS, AGRICULTURAL CROPS, HUMANS, AND LABORATORY ANIMALS. SYNERGISM WITH OTHER ATMOSPHERIC POLLUTANTS SUCH AS OXIDES OF SULFUR AND NITROGEN IS DISCUSSED. OCCUPATIONAL EXPOSURE, DOSAGE, AND EFFECTS ON PULMONARY AND RESPIRATORY SYSTEMS IN HUMANS AND ANIMALS ARE ALSO PRESENTED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 30/88 CITATIONS, 94 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SEPVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø87

PUBLICATION DATE: DEC 84

TITLE: APPLICATION OF THE NSF/PRA (NATIONAL SCIENCE FOUNDATION/POLICY RESEARCH AND ANALYSIS) RISK ANALYSIS PROGRAM RESULTS TO RISK MANAGEM

PERSONAL AUTHOR: OKRENT, D.; AND OTHERS

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DESCRIPTOR: \*AIR POLLUTION; \*CHEMICALS; \*HAZARDOUS MATERIALS; \*HAZARDOUS WASTES; \*PUBLIC HEALTH; \*MANAGEMENT; \*SAFETY; \*RISK ASSESSMENT; \*RESEARCH; \*WATER POLLUTION;

DESCRIPTIVE NOTE: 21P. PRICE CODE: PC A#2/MF A#1. ORDER NO.: PB86-1#7364/WEP

ABSTRACT: THE SUMMARY ADDRESSES THE APPLICATION OF RESEARCH RESULTS EMANATING FROM THE NSF/PRA RISK ANALYSIS PROGRAM TO SIX RISK MANAGEMENT SITUATIONS: (1) ASBESTOS IN SCHOOLS: (2) HAZARDOUS CHEMICAL WASTES; (3) INDOOR AIR POLLUTION; (4) TRANSPORTATION OF HAZARDOUS MATERIALS: (5) CARCINOGENS AND MUTAGENS IN DRINKING WATER; AND (6) AN INDUSTRY EMPLOYING BULK QUANTITIES OF A HAZARDOUS MATERIAL LIKE DIOXIN. A STRUCTURED APPROACH TO THE APPLICATION OF DECISION ANALYSIS IS PROVIDED, ALTERNATIVES TO REGULATION ARE IDENTIFIED AND DESCRIBED. AND SOME INSIGHT AS TO HOW THE PUBLIC SHOULD PERCEIVE RISK IS OFFERED. THE NEED FOR FURTHER CONSIDERATION OF THE PROBLEM OF INDOOR RADON IS HIGHLIGHTED AND RECOMMENDATIONS FOR ACHIEVING INCREASED USE OF NSF/IRA SPONSORED STUDIES BY RISK MANAGERS ARE INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: FW013088

PUBLICATION DATE: DEC 84

TITLE: APPLICATION OF THE NSF/PRA (NATIONAL SCIENCE FOUNDATION/POLICY RESEARCH AND ANALYSIS) RISK ANALYSIS PROGRAM RESULTS TO RISK MANAGEM

PERSONAL AUTHOR: OKRENT, D.; AND OTHERS

DESCRIPTOR: \*AIR POLLUTION: \*CHEMICALS; \*HAZARDOUS MATERIALS: \*HAZARDOUS WASTES; \*PUBLIC HEALTH; \*MANAGEMENT; \*SAFETY; \*RISK ASSESSMENT; \*RESEARCH; \*WATER POLLUTION; \*WATER QUALITY

DESCRIPTIVE NOTE: 347P. PRICE CODE: PC A15/MF AØ1. ORDER NO.: PB86-1Ø7356/WEP

ABSTRACT: THE TEXT DISCUSSES THE APPLICATION OF A RANGE OF RESEARCH RESULTS ON RISK ANALYSIS TO SIX SETS OF RISK MANAGEMENT SITUATIONS: (1) ASBESTOS IN SCHOOLS; (2) HAZARDOUS CHEMICAL WASTI SITES; (3) INDOOR AIR POLLUTION; (4) TRANSPORTATION OF HAZARDOUS MATERIALS; (5) CARCINOGENS AND MUTAGENS IN DRINKING WATER; AND (6) AN INDUSTRY EMPLOYING BULK QUANTITIES OF A HAZARDOUS MATERIAL SUCH AS DIOXIN. RECOMMENDATIONS FOR ACHIEVING INCREASED USE OF NSF/PRA SPONSORED STUDIES BY RISK MANAGERS ARE INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø89

PUBLICATION DATE: JUL 85

TITLE: METHODS FOR ASSESSING EXPOSURE TO CHEMICAL SUBSTANCES. VOLUME 2. METHODS FOR ASSESSING EXPOSURE TO CHEMICAL SUBSTANCES IN THE AMB

PERSONAL AUTHOR: FREED, J. R.; AND OTHERS

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*ASSESSMENT; \*CHEMICALS; \*EXPOSURE; \*POLLUTION CONTROL; \*MONITORING;

DESCRIPTIVE NOTE: 419P. PRICE CODE: PC A18/MF AØ1. ORDER NO.: PB86-107067/WEP

ABSTRACT: THE DOCUMENT IS THE SECOND IN A SERIES OF VOLUME DEVELOPED FOR THE U.S. ENVIRONMENTAL PROJECTION AGENCY. OFFICE OF TOXIC SUBSTANCES TO ASSIST IN THE ASSESSMENT OF TO CHEMICAL SUBSTANCES. THIS REPORT PRESENTS EXPOSURE METHODS THAT CAN BE USED TO ESTIMATE EXPOSURE TO CHEMICAL SUBSTANCES IN THE AMBIENT ENVIRONMENT AND INCLUDES MANY SUBSTANCES IN THE AMBIENT ENVIRONMENT AND INCLUDES MANT TOOLS, DATA SOURCES, AND MODELS THAT ARE USEFUL IN THE EXPOSURE ESTIMATION PROCEDURES. THE VOLUME IS ORGANIZED TO REFLECT THE FLOW OF INFORMATION IN AN AMBIENT EXPOSURE ASSESSMENT. SECTIONS 2 AND 3 PROVIDE INFORMATION ON THE PRELIMINARY DATA REQUIRED, I.E., PRODUCTION VOLUME, PHYSIOCHEMICAL PROPERTIES, AND USES OF THE CHEMICAL SUBSTANCES. SECTION 4 CONTAINS A DESCRIPTION OF THE AVAILABILITY AND USE OF MONITORING DATA BASES AND HOW MONITORING DATA ARE INTEGRATED IN THE OVERALL METHODS. SECTION 5 INDICATES HOW THE POPULATION METHODS (VOLUME 4) FIT INTO THE OVERALL PROCESS. SECTION 6 IS THE CORE OF THIS VOLUME: IT ADDRESSES THE ANALYTICAL FRAMEWORK FOR CALCULATING EXPOSURE AND DISCUSSES HOW TO ACCESS APPROPRIATE DATA FOR E. CH OF THE ANALYTICAL ELEMENTS. TO SUPPLEMENT THE TEXT. AN INFORMATION RESOURCE MATRIX WHICH INDEXES DATA BASES AND OTHER RESOURCES IS INCLUDED AS APPENDIX A: A LIST OF CHEMICALS STUDIED AND REGULATED BY FEDERAL AGENCIES AS OF 1984 IS PROVIDED AS APPENDIX B: AND EXAMPLES OF PERTINENT DATA BASE OUTPUTS ARE GIVEN IN APPENDIX C.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø9Ø

PUBLICATION DATE: JUL 85

TITLE: METHODS FOR ASSESSING EXPOSURE TO CHEMICAL SUBSTANCES. VOLUME 4. METHODS FOR ENUMERATING AND CHARACTERIZING POPULATIONS EXPOSED

PERSONAL AUTHOR: DIXON, D. A.; AND OTHERS

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*ASSESSMENT; \*CHEMICALS; \*EXPOSURE; \*POLLUTION CONTROL; \*PUBLIC HEALTH; \*POPULATION ANALYSIS

DESCRIPTIVE NOTE: 298P. PRICE CODE: PC A13/MF AØ1. ORDER NO.: PB86-107042/WEP

ABSTRACT: THE REPORT, ONE OF A SERIES OF REPORTS CONCERNING EXPOSURE ASSESSMENT, DESCRIBES METHODS FOR ESTIMATING THE SIZE OF POPULATIONS POTENTIALLY EXPOSED TO CHEMICAL SUBSTANCES. FIVE CATEGORIES OF EXPOSED POPULATIONS ARE COVERED: (1) POPULATIONS EXPOSED TO CHEMICALS IN THE AMRIENT ENVIRONMENT, (2) WORKERS, (3) POPULATIONS EXPOSED THROUGH INGESTION OF CHEMICALS IN FOOD, (4) USERS OF CONSUMER PRODUCTS, AND (5) POPULATIONS EXPOSED THROUGH INGESTING CHEMICALS IN DRINKING WATER. THE REPORT CONTAINS GENERAL DATA ON POPULATIONS FROM GOVERNMENTAL AGENCIES SUCH AS THE U.S. BUREAU OF CENSUS, U.S. DEPARTMENT OF LABOR, U.S. DEPARTMENT OF AGRICULTURE, AND EPA'S OFFICE OF DRINKING WATER. IT ALSO CONTAINS STEP-BY-STEP METHODS FOR LOCATING AND USING DATA TO ENUMERATE EACH SUBPOPULATION IDENTIFIED AS POTENTIALLY EXPOSED TO TOXIC CHEMICALS. APPENDIX A CONTAINS SAMPLE CALCULATIONS ILLUSTRATING THE METHODS PRESENTED IN THE TEXT. APPENDIX B IS OSHA'S INDUCTRY-OCCUPATION (1-0) MATRIX. DESCRIBED IN SECTION 3 OF THE REPORT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW#13#91

PUBLICATION DATE: NOV 85

TITLE: GROUND WATER POLLUTION: GENERAL STUDIES. DEC 1984-NOV 1985 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES: \*GROUNDWATER; MONITORING: \*POLLUTION CONTROL; WATER QUALITY; \*WATER RESOURCES

DESCRIPTIVE NOTE: 118P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB86-85Ø823/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING SOURCES, CONTAMINANT TRANSPORT, AND MONITORING OF POLLUTANTS IN AGUIFERS. TOPICS INCLUDE POLLUTION CHARACTERIZATION FROM LANDFILLS AND MINE DRAINAGE, DESCRIPTIONS OF STUDY PROGRAMS UNDERTAKEN BY SPECIFIC STATES, AND SUPERFUND SITE STUDIES OF CONTAMINATED AREAS. THE UTILIZATION OF MATHEMATICAL MODELS IS ALSO DISCUSSED. STUDIES PERTAINING SPECIFICALLY TO IRRIGATION, AND POLLUTION FROM FERTILIZERS ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 118 CITATIONS. ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE. 5285 PORT ROYAL ROAD. SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø92

PUBLICATION DATE: NOV 85

TITLE: GROUND WATER POLLUTION: GENFOAL STUDIES. FEB 1980-NOV 1984 (CITATIONS FROM THE NTIS BASE).

DESCRIPTOR: \*ANNOTATED BIBLI 'HIES; BIBLIOGRAPHIES; \*CONTAMINATION; \*GROUNDWATER; \*F LUTION CONTROL; \*WATER POLLUTION CONTROL; \*WATER QUALITY

DESCRIPTIVE NOTE: 285P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB86-85Ø815/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING SOURCES, CONTAMINANT TRANSPORT, AND MONITORING OF POLLUTANTS IN AQUIFERS. TOPICS INCLUDE POLLUTION FROM LANDFILLS, INJECTION WELLS, RADIOACTIVE WASTE DISPOSAL, AND MINE DRAINAGE. SITE STUDIES OF WATER QUALITY CHARACTERIZATION, AND THE UTILIZATION OF MATHEMATICAL MODELS ARE CONSIDERED. STUDIES PERTAINING TO IPRIGATION AND POLLUTION FROM FERTILIZERS ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 384 CITATIONS, NONE OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE. 5285 PORT ROYAL ROAD. SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø93

PUBLICATION DATE: NOV 85

TITLE: OZONIZATION USED IN WATER AND SEWAGE TREATMENT. 1970-NOVEMBER 1985 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; \*DISINFECTION: \*OZONE; \*OZONATION: SEWAGE: \*WASTEWATER TREATMENT: \*WATER TREATMENT

DESCRIPTIVE NOTE: 260P. PRICE CODE: PC N01/MF N01. ORDER NO.: PB86-850740/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE UTILIZATION OF JZONE FOR THE PURIFICATION OF INDUSTRIAL WASTEWATER, SEWAGE, AND DRINKING WATER. TOPICS INCLUDE LABORATORY AND FIELD INVESTIGATIONS OF OZONE PURIFICATION TECHNIQUES ALONE, AND IN COMBINATION WITH OTHER TREATMENT METHODS. SOME ATTENTION IS GIVEN TO TOXIC EFFECTS OF PRODUCTS RESULTING FROM OZONE TREATMENT OF SEWAGE AND WASTEWATERS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 264 CITATIONS, 19 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE. 5285 PORT ROYAL ROAD. SPRINGFIELD. VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø94

PUBLICATION DATE: NOV 85

TITLE: ACID MINE DRAINAGE. 1977-NOV 1985 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGTAPHIES: \*ACID MINE DRAINAGE: \*HEAVY METALS: \*METALS: \*POLLUTION CONTROL; \*WASTE TREATMENT: ENVIRONMENT: \*ENVIRONMENTAL IMPACT

DFSCRIPTIVE NOTE: 268.. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB86-85Ø336/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE CONTROL AND TREATMENT OF ACI MINE DRAINAGE. TECHNIQUES DISCUSSED FOR TREATING WASTES WITH HEAVY METALS INCLUDE PRECIPITATION, CEMENTATION. ION EXCHANGE, CHARGE MEMBRANE, ULTRAFILTRATION, OZONATION, SOLVENT EXTRACTION. AND ELECTRODIALYSIS. THE ENVIRONMENTAL IMPACTS OF ACID MINE DRAINAGE ON RIVERS, STREAMS, AND LAKES ARE ALSO DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 243 CITATIONS, 20 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø95

PUBLICATION DATE: SEP 85

TITLE: MICROB.AL RESISTANCE TO DISINFECTANTS: MECHANISMS AND SIGNIFICANCE.

PERSONAL AUTHOR: HO'F, J. C.: AKIN, E. W.

DESCRIPTOR: \*BIOLOGY: \*DISINFECTION: \*DRINKING WATER \*\*
\*MICROORGANISMS: \*RESISTANCE: \*WATER TREATMENT

DESCRIPTIVE NOTE: 33P. FRICE CODE: PC AØ3/MF AØ1. ORDER NO.: PB86-198297/WL?

ABSTRACT: DRINKING WATER DISINFECTION PROVIDES THE FINAL BARRIER TO WATER BORNE TRANSMISSION OF A WIDE VARIETY OF WATERBORNE IN'ECTIOUS AGENTS INCLUDING POTENTIALLY PATHOGENIC BACTERIA. VIRUSES, AND PROTOZOA. THESE AGENTS DIFFER GREATLY IN THE R INNATE RESISTANCE TO INACTIVATION BY DISINFECTANTS. RANGING FROM EXTREMELY SENSITIVE BACTERIAL AGENTS TO HIGHLY RESISTANT PROTOZOAN CYSTS. THE CLOSE SIMILARITY BETWEEN MICROOGRANISM INACTIVATION RATES AND THE KINETICS OF CHEMICAL REACTIONS HAS LONG BEEN RECOGNIZED. CAREFULLY UNDER CONTROLLED CONDITIONS, FIRST ORPER MICROORGANISM INACTIVATION RATES SIMULATE FIRST ORDER CHEMICAL REACTION RATES MAKING IT POSSIBLE TO PREDICT THE EFFECTIVENESS OF DISINFECTION UNDER SPECIFIC CONDITIONS. IN PRACTICE, CHANGES IN RELATIVE RESISTANCE AND DEVIATIONS FROM FIRST ORDER KINETICS ARE CAUSED BY A NUMBER OF FACTORS INCLUDING MICROBIAL GROWTH CONDITIONS, AGGREGATION, AND ASSOCIATION WITH PARTICULATE MATERIALS. THE NET EFFECT OF ALL OF THESE FACTORS IS REDUCTION IN THE EFFECTIVENESS AND PREDICTABILITY OF DISINFECTION PROCESSES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION N MBER: EWØ13096

TITLE: SURVEY OF ORGANIC DRINKING WATER CONTAMINANTS: CARCINOGENS, MUTAGENS, AND TUMOR PROMOTERS (REVISED).

PERSONAL AUTHOR: FAPA, P. A.; AND OTHERS

DESCRIPTOR: \*CARCINOGENS; \*CHEMICALS; \*CONTAMINANTS; \*DRINKING WATER: \*HEALTH; \*MUTAGENS; \*SURVEYS

DESCRIPTIVE NOTE: PRICE CODE: PC AØ7/MF AØ1. ORDER NO.: PB86-1Ø6499/WEP

ABSTRACT: A SURVEY OF THE BIOLOGICAL LITERATURE ON 1,565 ORGANIC CHEMICALS THAT HAVE BEEN IDENTIFIED AS CONTAMINANTS OF DRINKING WATER WAS CARRIED OUT IN ORDER TO DEVELOP A DATA BASE OF THE CARCINOGENICITY, MUTAGENICITY, AND TUMORPROMOTING ACTIVITY OF THESE CHEMICALS. CRITERIA ARE DESCRIBED THAT WERE USED FOR EVALUATING THE BIOLOGICAL TEST RESULTS AND CLASSIFYING THE CHEMICALS AS RECOGNIZED CARCINOGENS, SUSPECTED CARCINOGENS, TUMOR PROMOTERS, AND MUTAGENS. TABLES OF BIOLOGICAL DATA ARE PROVIDED FOR THE CLASSIFICATION OF 14 CHEMICALS AS RECOGNIZED CARCINOGENS, 42 CHEMICALS AS SUSPECTED CARCINOGENS, 23 CHEMICALS AS TUMOR PROMOTERS, AND 67 CHEMICALS AS MUTAGENS. DRINKING WATER CONCENTRATION VALUES ARE PROVIDED FOR THE CHEMICALS CLASSIFIED ACCORDING TO BIOLOGICAL ACTIVITY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø97

PUBLICATION DATE: DEC 85

TITLE: DEVELORMENT OF TASK STATEMENTS AND STANDARDS FOR WATER AND WASTEWATER TREATMENT PLANT MAINTENANCE.

PERSONAL AUTHOR: MOREAU, R. S.

DESCRIPTOR: "COSTS; "COMPUTER APPLICATIONS; "EQUIPMENT; "FACILITIES: "MAINTENANCE; "OPERATIONS (WATER); OPERATIONS (WASTEWATER): "PERSONNEL: "TASK ANALYSIS: "WATER TREATMENT; "WASTEWATER TREATMENT"

DESCRIPTIVE NOTE: 88P. PRICE CODE: PC AØ5/MF AØ1. ORDER NO.: AD-A158987/8/WEP

ABSTRACT: THE GOAL OF THIS PROJECT WAS TO PRODUCE A SET OF LABOR HOUR AND FREQUENCY STANDARDS THAT CAN BE APPLIED TO MAINTENANCE, REPAIR, AND REPLACEMENT OF EQUIPMENT AND APPURTENENCES USED IN WATER AND WASTEWATER TREATMENT. A COMPLETE LIST OF UNIT OPERATIONS THAT ARE USED IN WATER AND WASTEWATER TREATMENT WAS COMPILED. EACH OF THE UNIT OPERATIONS LISTED WAS REVIEWED IN DETAIL AND ANY EQUIPMENT OR APPURTENANCE THAT MIGHT BE NECESSARY FOR THAT OPERATION WAS LISTED. EACH COMPONENT LISTED WAS ANALYZED TO DETERMINE THE TYPES OF TASKS THAT WOULD HAVE TO BE ACCOMPLISHED OVER THE LIFE OF THE COMPONENT TO KEEP IT IN OPERATING CONDITION. A SEVEN DIGIT NUMBERING SYSTEM WAS APPLIED TO THE LIST GIVING EACH TASK STATEMENT A UNIQUE NUMBER. THERE ARE MORE THAN SIX HUNDRED TASK STATEMENTS FOR THE WATER AND WASTEWATER TREATMENT PLANTS. IT WOULD BE VERY TIME CONSUMING AND TEDIOUS TO KEEP TRACK OF ALL THE INFORMATION REQUIRED WITHOUT THE USE OF A COMPUTERIZED DATA BASE. FOR THIS PROJECT. A RELATIONAL DATA BASE CALLED D-BASE III WAS USED. A ROUTINE DEVELOPED BY THE ARCHITECTURAL ENGINEERING DEPARTMENT OF THE PENNSYLVANIA STATE UNIVERSITY FOR THE CERL PROJECT ON PLUMBING AND ELECTRICAL SYSTEMS WAS MODIFIED FOR USE IN T'IS PROJECT. THE COMPUTER USED WAS AN IBM-PC/XT WITH A 10 MEGABYTE HARD DISK. APPENDIX C LISTS THE DIRECTIONS FOR USE OF THE SYSTEM INCLUDING INPUT AND OUTPUT OF DATA.

ERIC

Full Text Provided by ERIC

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13Ø98

TITLE: SOFTWARE.

DESCRIPTOR: \*COMPUTER APPLICATIONS; \*COMPUTER SOFTWARE; \*COMPUTER PROGRAMS; \*ENGINEERING; EDUCATION; MANAGEMENT; MATHEMATICS; MODELING; SIMULATIONS; STATISTICS

DESCRIPTIVE NOTE: 353P. PRICE: \$29.95

ABSTRACT: THIS COMPREHENSIVE DIRECTORY OF ENGINEERING SOFTWARE CONTAINS HUNDREDS OF PROGRAM LISTINGS FROM LEADING SOFTWARE VENDORS. THE LISTINGS ARE CATEGORIZED IN 17 AREAS: AEROSPACE, Chemical, Civil, Electrical, Industrial, Mechanical, Architectural, Structural and Petrochemical engineering, Database Management, Design/Analysis, Enhancements Office/Business Management, Math/Statistics, Education, Modeling and Simulation, and Surveying/Mapping. The Directory Contains Descriptions of Each Program, As Well as Price, Training, Support, Hardware, Operating System, Source Language, and other information.

AVA LABILITY: MOORE DATA MANAGEMENT SERVICE. 1660 SOUTH HIGHWAY 100, MINNEAPOLIS, MN 55416

IRIS ACCESSION NUMBER: EWØ13Ø99

PUBLICATION DATE: 85

TITLE: PESTICIDES: A COMMUNITY ACTION GUIDE.

PERSONAL AUTHOR: BUMSTEAD, CYNTHIA, ED: AND OTHERS

DESCRIPTOR: \*COMMUNITY ACTION; \*LEGISLATION; \*PESTICIDES; \*PUBLIC PARTICIPATION; \*HAZARDOUS MATERIALS; \*REGULATIONS: \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 23P. PRICE: \$3.00

ABSTRACT: THIS PUBLICATION EXPLAINS THE NATURE AND EXTENT OF THE PESTICIDE PROBLEM AND WHAT IS BEING DONE ABOUT IT. IT INCLUDES INFORMATION ABOUT THE SHORT -AND LONG-TERM HEALTH EFFECTS OF VARIOUS SUBSTANCES; OCCUPATIONAL EXPOSURE TO PESTICIDES AND THE WORKER PROTECTION THAT THEORETICALLY COMES FROM OSHA; AGRICULTURAL PESTICIDES; ALTERNATIVES TO THE USE OF PESTICIDES ON FARMS; PESTICIDE USE AND OVERUSE IN FORESTS, CITIES, AND TOWNS; FEDERAL AND STATE LAWS THAT REGULATE PESTICIDES; AND ACTIONS COMMUNITIES CAN TAKE.

AVAILABILITY: CONCERN, INC.

IRIS ACCESSION NUMBER: EWØ131ØØ

PUBLICATION DATE: 84

TITLE: PESTICIDES IN FOCD: WHAT THE PUBLIC NEEDS TO KNOW.

PERSONAL AUTHOR: MOTT, LAWRIE; BROAD, MARTHA

DESCRIPTOR: \*AGRICULTURE; \*FOOD; HEALTH; REGULATIONS; RISK ASSESSMENT; \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 123P. PRICE: \$7.5Ø

ABSTRACT: THIS PUBLICATION DESCRIBES PESTICIDES THAT MAY BE FOUND IN FOODS. INFORMATION IS PROVIDED ON TYPES OF PESTICIDES USED WITH VARIOUS FOODS.

AVAILABILITY: NATURAL RESOURCES DEFENSE COUNCIL

IRIS ACCESSION NUMBER: EWØ131Ø1

PUBLICATION DATE: OCT 85

TITLE: 'TER HYACINTHS: WASTE TREATMENT AND METHANE PRODUCTIC: 1979-OCTOBER 1985 (CITATIONS FROM THE ENERGY DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; \*ENERGY: \*ENERGY FARMING: \*METHANE PRODUCTION: \*WASTEWATER TREATMENT: \*WATER QUALITY: \*WATER HYACINTHS

DESCRIPTIVE NOTE: 155P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-87Ø434/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE USE OF WATER HYACINTHS IN WASTE TREATMENT AND METHANE PRODUCTION. ANAEROBIC DIGESTION PROCESSES, WASTE PROCESSING, AND DIGESTION CONDITIONS ARE DISCUSSED. WATER HYACINTH WASTEWATER TREATMENT AND WATER QUALITY CONTROL ARE INCLUDED. ENERGY FARMING AND CROPPING THROUGH AQUATIC BIOMASS, FORESTRY, AND AGRICULTURAL PLANTS ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 170 CITATIONS, 46 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 FORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ131Ø2

PUBLICATION DATE: MAY 83

TITLE: CANADIAN NUCLEAR FUEL WASTE MANAGEMENT PROGRAM.

PERSONAL AUTHOR: RUMMERY, T. E.; ROSINGER, E. L. J.

DESCRIPTOR: \*CANADA: \*MANAGEMENT: \*NUCLEAR FUEL: \*NUCLEAR WASTES: \*WASTE DISPOSAL: \*WASTE STORAGE: \*WASTE TREATMENT

DESCRIPTIVE NOTE: 25P. PRICE COLE: PC AØ2/MF AØ1. ORDER NO.: DE-859Ø2166/WEP

ABSTRACT: THE CANADIAN NUCLEAR FUEL WASTE MANAGEMENT PROGRAM IS NOW WELL ESTABLISHED. THIS REPORT OUTLINES THE GENERIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT UNDERWAY IN THIS PROGRAM TO ASSESS THE CONCEPT OF IMMOBILIZATION AND SUBSEQUENT DISPOSAL OF NUCLEAR FUEL WASTE DEEP IN A STABLE PLUTONIC ROCK IN THE CANADIAN SHIELD. THE PROGRAM PARTICIPANTS, FUNDING, SCHEDULE AND ASSOCIATED EXTERNAL REVIEW PROCESSES ARE BRIEFLY OUTLINED. THE MAJOR SCIENTIFIC AND ENGINEERING COMPONENTS OF THE PROGRAM, NAMELY, IMMOBILIZATION STUDIES, GEOSCIENCE RESEARCH AND ENVIRONMENTAL AND SAFETY ASSESSMENT, ARE DESCRIBED IN MORE DETAIL. (ATOMINDEX CITATION 16:842938)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ13103

PUBLICATION DATE: 84

TITLE: CARBON-14 WASTE MANAGEMENT.

PERSONAL AUTHOR: BUSH, R. P.; AND OTHERS

DESCRIPTOR: \*CARBON-14: \*MANAGEMENT: \*PUBLIC HEALTH; \*RADIOACTIVE MATERIALS; \*RADIATION: \*SAFETY: \*WASTE STORAGE: \*WASTE DISPOSAL: \*WASTE TREATMENT

DESCRIPTIVE NOTE: 136P. PRICE CODE: PC A07/MF A01. ORDER NO.: DE-85701671/WEP

ABSTRACT: CARBON-14 OCCURS IN NATURE, BUT IS ALSO FORMED IN NUCLEAR REACTORS. BECAUSE OF ITS LONG HALF-LIFE AND THE BIOLOGICAL SIGNIFICANCE OF CARBON, RELEASES FROM NUCLEAR FACILITIES COULD HAVE A SIGNIFICANT RAGIOLOGICAL IMPACT. WASTE MANAGEMENT STRATEGIES FOR CARBON-14 ARE THEREFORE OF CURRENT CONCERN. CARBON-14 IS PRESENT IN A VARIETY OF WASTE STREAMS BOTH AT REACTORS AND AT REPROCESSING PLANTS. A RELIABLE ICTURE OF THE PRODUCTION AND RELEASE OF CARBON-14 FROM VARIOUS REACTOR SYSTEMS HAS BEEN BUILT UP FOR THE PURPOSE OF THIS STUDY. THE KEY PROBLEM IN CARBON-14 MANAGEMENT IS ITS RETENTION OF OFF-GAS STREAMS, PARTICULARLY IN THE DISSOLVER OFF-GAS STREAM AT REPROCESSING PLANTS. THREE ALTERNATIVE TRAPPING PROCESSES THAT CONVERT CARBON DIOXIDE INTO INSOLUBLE CARBONATES HAVE BEEN SUGGESTED. THE RESULTS SHOW THAT NONE OF THE OPTIONS CONSIDERED NEED BE REJECTED ON THE GROUNDS OF POTENTIAL RADIATION DOSES TO INDIVIDUALS. ALL EXPOSURES SHOULD BE AS LOW AS REASONABLY ACHIEVABLE. ECONOMIC AND SCCIAL FACTORS BEING TAKEN INTO ACCOUNT. IF, ON THESE GROUNDS, RETENTION AND DISPOSAL OF CARBON-14 IS FOUND TO BE BENEFICIAL, THEN, SUBJECT TO THE LIMITATIONS NOTED, APPROPRIATE RETENTION, IMMOBILIZATION AND DISPOSAL TECHNOLOGIES HAVE BEEN IDENTIFIED. (ATOMINDEX CITATION 16:#31652)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ131Ø4

PUBLICATION DATE: JUL 85

TITLE: GUIDELINES FOR WATER QUALITY LABORATORY OPERATIONS.

PERSONAL AUTHOR: JONES, J. N.; CULLINANE, M. J.

DESCRIPTOR: \*GUIDELINES; \*LABORATORY PROCEDURES; \*QUALITY ASSURANCE; \*REFERENCE MATERIALS; \*SAMPLING; \*WATER QUALITY

DESCRIPTIVE NOTE: 133P. PRICE CODE: PC AØ7/MF AØ1. ORDER NO.: AD-A158 817/7/WEP

ABSTRACT: THIS REPORT CONTAINS INFORMATION WHICH WILL BE HELPFUL IN BOTH PERSONNEL WORKING IN WATER QUALITY LABORATORIES AND TO PERSONNEL RESPONSIBLE FOR MONITORING WATER QUALITY LABORATORY. MANY INFORMATION SOURCES ARE GIVEN TO INCLUDE CONTACTS WITH THE U.S. ENVIRONMENTAL PROTECTION AGENCY, U.S. GEOLOGICAL SURVEY, AND THE CE. MANY BASIC REFERENCES ARE ALSO GIVEN WHICH COVER ALL ASPECTS OF WATER QUALITY LABORATORY OPERATIONS. TECHNIQUES IN SAMPLE COLLECTION AND SAMPLE HANDLING ARE GIVEN ALONG WITH RECOMMENDED AND APPROVED METHODS FOR SAMPLE ANALYSIS. THERE IS A SECTION ADDRESSING LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL WHICH CAN BE USED FROM BOTH AN OPERATIONAL AND MONITORING STANDPOINT. A SURVEY OF CE WATER QUALITY LABORATORY CAPABILITIES WAS TAKEN AND THE RESULTS ARE PRESENTED. FROM THE SURVEY THE MOST OFTEN PERFORMED ANALYSES IN CE LABORATORIES WERE OBTAINED. A DISCUSSION OF THESE ANALYSES AND POTENTIAL PROBLEMS WITH THESE ANALYSES IS PRESENTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ131Ø5

PUBLICATION DATE: OCT 85

TITLE: SOLID WASTE INCINERATORS. 1978-OCTOBER 1985 (CITATIONS FROM FRE U.S. PATENT DATA BASE).

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES: BIBLIOGRAPHIES: \*DESIGN: \*INCINERATORS: \*POLLUTION CONTROL; \*SOLID WASTES: \*OPERATIONS (WASTE DISPOSAL)

DESCRIPTIVE NOTE: 169P. PRICE CODE: PC NØ1/MF NØ1. ORDER NO.: PB85-87Ø277/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS OF SELECTED PATENTS CONCERNING THE DESIGN AND UTILIZATION OF INCINERATORS AND INCINERATOR COMPONENTS USED FOR THE DESTRUCTION OF MUNICIPAL, INDUSTRIAL, AND AGRICULTURAL SOLID WASTE PRODUCTS. MATERIALS HANDLING DEVICES, AND POLLUTION CONTROL MEASURES ARE DISCUSSED. INTEGRATED INCINERATOR/HEATING SYSTEM EQUIPMENT, AND PORTABLE UNITS ARE CONSIDERED, (CONTAINS 213 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW#131#6
PUBLICATION DATE: AUG 85

TITLE: RAPID INFILTRATION WASTEWATER TREATMENT FOR SMALL COMMUNITIES.

PERSONAL AUTHOR: BENNETT, E. R.; LEACH, L. E.

DESCRIPTOR: \*FACILITIES; \*INFILTRATION; \*OPERATIONS (WASTEWATER); \*PERFORMANCE EVALUATION; \*RURAL AREAS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 23P. PRICE CODE: PC AØ2/MF AØ1. ORDER NO.: PB85-238533/WEP

ABSTRACT: RAPID INFILTRATION TREATMENT PERFORMANCE OF THREE INFILTRATION BASINS RECEIVING PRIMARY TREATED MUNICIPAL WASTEWATER IS EVALUATED FOR OPTIMUM TOTAL NITROGEN CONTROLUSING A SERIES OF MANUAL OPERATIONAL TECHNIQUES AND BY REMOTE CONTROL COMPUTER OPERATION OF A SPRINKLER SYSTEM. THREE TYPES OF LOADING SEQUENCES WERE USED: FLOOD LOADING EVERY THREE AND ONE-HALF DAYS, FLOODING DAILY AND SPRINKLER SYSTEM LOADING BASED ON SOIL MOISTURE SENSORS AND COMPUTER ANALYSIS AND CONTROL. THE INFLUENT AND EFFLUENT QUALITY VARIATIONS WERE INCREASED SUBSTANTIALLY COMPARED WITH PREVIOUS STUDIES. UNDER OPTIMUM CONDITIONS, SUSTAINED REMOVALS OF TOTAL NITROGEN ABOVE 75% WERE ACHIEVED WITH VALUES FOR INDIVIDUAL WEEKS IN THE MID 80% RANGE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EWØ131Ø7

PUBLICATION DATE: JUL 85

TITLE: RESEARCH DIRECTION IN INSTRUMENTATION AND CONTROL OF WATER AND WASTEWATER TREATMENT

PERSONAL AUTHOR: BISHOP, D. F.; SCHUK, W. W.

DESCRIPTOR: \*AUTOMATIC CONTROLS; \*INSTRUMENTATION: \*RESEARCH; \*TECHNOLOGY; \*WASTEWATER TREATMENT; \*WATER TREATMENT

DESCRIPTIVE NOTE: 21P. PRICE CODE: PC AØ2/MF AØ1. ONDER NO.: PB%5-237Ø71/WEP

ABSTRACT INSTRUMENTATION AND AUTOMATIC CONTROL, ALREADY COMMON IN OIL, CHEMICAL AND OTHER INDUSTRIES. IS MAKING RAPID STRIDES IN WATER SUPPLY AND WASTEWATER TREATMENT SYSTEMS. THE REPORT DESCRIBES SOME OF THE CAPABILITY NOW AVAILABLE AND SUGGESTS DIRECTIONS FOR NEW RESEARCH.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161



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*CHEMICALS	(29) EWØ12959 EWØ13Ø17 EWØ13Ø73	EWØ12849 EWØ12963 EWØ13Ø18 EWØ13Ø87	EWØ12897 EWØ12964 EWØ13Ø19 EWØ13Ø88	EWØ12938 EWØ12993 EWØ13Ø3Ø EWØ13Ø89	EWØ12941 EWØ12998 EWØ13Ø44 EWØ13Ø9Ø	EWØ12956 EWØ13Ø13 EWØ13Ø59 EWØ13Ø96	EWØ12957 EWØ13Ø14 EWØ13Ø61	EWØ12958 EWØ13Ø16 EWØ13Ø68
*CHEMICALS CHEMICALS	EWØ12959 EWØ13Ø17	EWØ12963 EWØ13Ø18	EWØ12964 EWØ13Ø19	EWØ13Ø3Ø	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
	EWØ12959 EWØ13Ø17 EWØ13Ø73	EWØ12963 EWØ13Ø18 EWØ13Ø87	EWØ12964 EWØ13Ø19 EWØ13Ø88	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS	EWØ12959 EWØ13Ø17 EWØ13Ø73	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921	EWØ12964 EWØ13Ø19 EWØ13Ø88	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ13Ø14	EWØ12964 EWØ13Ø19 EWØ13Ø88	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ13Ø14 EWØ12994	EWØ12964 EWØ13Ø19 EWØ13Ø88	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY CHEMISTRY	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1) (1)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ13Ø14 EWØ12994	EWØ12964 EWØ13Ø19 EWØ13Ø88 EWØ1298Ø	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY CHEMISTRY *CHESAPEAKE BAY	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1) (1) (1)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ13Ø14 EWØ12994 EWØ12976	EWØ12964 EWØ13Ø19 EWØ13Ø88 EWØ1298Ø	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY CHEMISTRY *CHESAPEAKE BAY *CHLORAMINES	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1) (1) (1) (2)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ13Ø14 EWØ12994 EWØ12976 EWØ13Ø5Ø	EWØ12964 EWØ13Ø19 EWØ13Ø88 EWØ1298Ø	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY CHEMISTRY *CHESAPEAKE BAY *CHLORAMINES *CHLORINATION	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1) (1) (1) (2) (1)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ13Ø14 EWØ12994 EWØ12976 EWØ13Ø5Ø EWØ12976	EWØ12964 EWØ13Ø19 EWØ13Ø88 EWØ1298Ø	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY CHEMISTRY *CHESAPEAKE BAY *CHLORAMINES *CHLORINATION *CHROMATOGRAPHY	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1) (1) (1) (2) (1) (1)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ12994 EWØ12976 EWØ12976 EWØ12976 EWØ12976	EWØ12964 EWØ13Ø19 EWØ13Ø88 EWØ1298Ø	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY CHEMISTRY *CHESAPEAKE BAY *CHLORAMINES *CHLORINATION *CHROMATOGRAPHY *CLFANUP	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1) (1) (1) (2) (1) (1) (1)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ12994 EWØ12976 EWØ12976 EWØ12976 EWØ12994 EWØ12994	EWØ12964 EWØ13Ø19 EWØ13Ø88 EWØ1298Ø	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY CHEMISTRY *CHESAPEAKE BAY *CHLORAMINES *CHLORAMINES *CHLORINATION *CHROMATOGRAPHY *CLFANUP	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1) (1) (1) (2) (1) (1) (1) (1)	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ12994 EWØ12976 EWØ12976 EWØ12976 EWØ12976 EWØ12994 EWØ13Ø6Ø EWØ1298Ø	EWØ12964 EWØ13Ø19 EWØ13Ø88 EWØ1298Ø	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16
CHEMICALS *CHEMICAL TRANSPORT *CHEMISTRY CHEMISTRY *CHESAPEAKE BAY *CHLORAMINES *CHLORINATION *CHROMATOGRAPHY *CLEANUP CLEANUP *CLEAR AIR ACT	EWØ12959 EWØ13Ø17 EWØ13Ø73 (3) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	EWØ12963 EWØ13Ø18 EWØ13Ø87 EWØ12921 EWØ12994 EWØ12976 EWØ12976 EWØ12976 EWØ12994 EWØ12994 EWØ13Ø6Ø EWØ1298Ø EWØ13Ø8Ø	EWØ12964 EWØ13Ø19 EWØ13Ø88 EWØ1298Ø	EWØ13Ø3Ø EWØ13Ø89	EWØ12998 EWØ13Ø44	EWØ13Ø13 EWØ13Ø59	EWØ13Ø14	EWØ13Ø16



*COASTAL WETLANDS *COLIFORMS	(1) (1)	EWØ12996 EWØ13Ø54						
*COMBUSTION	(1)	EWØ1295Ø						
*COMMUNITY ACTION	(2)	EWØ12973	EW#13099					
*COMPLIANCE	(5)	EWØ12987	EWØ12989	EWØ1299Ø	EWØ12991	EWØ13Ø82		
COMPLIANCE	(2)	EWØ12949	EWØ13Ø69					
*COMPOSTING	(2)	EWØ13Ø36	EWØ13Ø47					
*COMPUTER ANALYSIS	(1)	EWØ12919						
*COMPUTER APPLICATIONS	(11) EWØ13Ø28	EWØ12835 EWØ13Ø31	EWØ12898 EWØ13Ø97	EWØ12919 EWØ13Ø98	EWØ13Ø2Ø	EWØ13Ø21	EWØ13Ø24	EWØ13Ø25
*COMPUTER DATABASES	(1)	E.4013051						
*COMPUTER PROGRAMS	(2)	EWØ12835	EWØ13Ø98					
*COMPUTER SOFTEWARE	(1)	EWØ13Ø21						
*COMPUTER SOFTWARE	(5)	EWØ12835	EWØ13Ø2Ø	EWØ13Ø24	EWØ13Ø28	EWØ13Ø98		
*CONFERENCE PROCEEDINGS	(2)	EWØ12974	EWØ12996					
CONFERENCE PROCEEDINGS	(1)	EWØ12992						
*CONSTRUCTION	(2)	EWØ13Ø35	EWØ13Ø53					
CONSTRUCTION	(3)	EWØ12942	EWØ13Ø26	EWØ13Ø38				
*CONSTRUCTION GRANTS	(1)	EWØ12925						
*CONTAINMENT	(2)	EWØ12944	EWØ13Ø23					
*CONTAMINANTS	(2)	EWØ12965	EWØ13Ø96					
"CONTAMINATION	(9) EWØ13Ø68	EWØ12896 EWØ13Ø92	EWØ129Ø9	EWØ1298Ø	EWØ12993	EWØ13ØØ5	EWØ13ØØ7	EWØ13Ø34
CONTAMINATION	(2)	EWØ1291Ø	EWØ12992					
CONTRACTING	(1)	EWØ13Ø58						
*CONTRACTS	(1)	EWØ13ØØ1						
*CONTROL TECHNOLOGIES	(1)	EWØ12935						
*CORROSION	(2)	EWØ12837	EWØ12838					
CORROSION	(1)	EWØ12937						
*CORROSION CONTROL	(2)	EWØ12937	EWØ13Ø37					
CORROSION CONTROL	(1)	EWØ12944						
*CORROSION PREVENTION	(1)	EWØ12937						
*COSTS	(11) EWØ13Ø3Ø	EWØ12925 EWØ13Ø33	EWØ12926 EWØ13Ø68	EWØ12933 EWØ13Ø97	EW#12943	EWØ12948	EWØ13Ø25	EWØ13Ø28





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COSTS *DAMS	(1)	EWØ12939 EWØ13ØØ2	EVØ1294Ø	EWØ12942	EWØ12947	EWØ12949	EWØ1298Ø	EWØ13Ø26
*DATA ANALYSIS	(1)	EWØ12919						
DEBT	(1)	EWØ13Ø58						
*DECISION MAKING	(1)	EWØ13ØØ6						
*DEEP WELLS	(1)	EWØ13Ø78						
*DEFINITIONS	(1)	EWØ12988						
*DEMONSTRATION PROJECTS	(1)	E WØ13Ø82						
*DESIGN	(11) EWØ13Ø49	E WØ12898 E WØ13Ø53	EWØ12899 EWØ13Ø77	EWØ12925 EWØ131Ø5	EWØ1293Ø	EWØ13ØØ7	EWØ13Ø26	EWØ13Ø35
DESIGN	(7)	EWØ12939	EWØ1294Ø	EWØ12942	EWØ12945	EWØ12947	EWØ12985	EWØ13Ø38
*DESIGN MANUALS	(1)	EWØ13Ø37						
*DETECTION	(1)	EWØ12968						
DETECTION	(1)	EWØ13Ø64						
*DEVELOPING COUNTRIES	(2)	EWØ12929	EWØ13Ø8Ø					
*DEWATERING	(2)	EWØ13Ø48	EWØ13Ø77					
DEWATERING	(1)	E WØ13ØØ8						
*DIAGNOSIS	(1)	EW913Ø12						
*DIGESTERS	(1)	EWØ13Ø79						
*DIOXINS	(1)	EWØ12963						
*DISEASE	(1)	EWØ13Ø11						
*DISEASES	(2)	EWØ1291Ø	EWØ13Ø55					
DISEASES	(1)	EWØ13Ø57						
*DISI'VECTION	(1Ø) EWØ13Ø49	E WØ 1 Ø Ø 1 4 E WØ 1 3 Ø 9 3	EWØ1ØØ15 EWØ13Ø95	EWØ1ØØ16	EWØ1ØØ17	EWØ12976	EWØ12985	EWØ12994
DISINFECTION	(1)	EWØ12897						
*DISPERSANTS	(1)	EWØ13Ø22						
*DISPOSAL	(1)	EWØ12938						
*DISPOSAL SITES	(1)	EWØ12935						
*DISTRIBUTION PRESSURE	(1)	EWØ12839						
*DREDGING	(1)	E WØ13ØØ2						
*DRINKING WATER	(17) EWØ12976 EWØ13Ø95	E WØ1ØØ14 E WØ12993 E WØ13Ø96	EWØ1ØØ15 EWØ13Ø1G	EWØ1ØØ16 EWØ13Ø52	EWØ1ØØ17 EWØ13Ø55	EWØ12849 EWØ13064	EWØ12949 EWØ13Ø68	EWØ12968 EWØ13Ø69



*DYES ECOLOGY	(1) (1)	EWØ12926 EWØ12996						
ECONOMICS	(3)	EWØ12937	EWØ13Ø36	EWØ13Ø61				
*ECOSYSTEMS	(1)	EWØ12966						
*ECOTOXICOLOGY	(1)	EWØ12966						
*ECUADOR	(1)	EWØ12967						
*EDUCATION	(2)	EWØ12912	EWØ13Ø82					
EDUCATION	(1)	EWØ13Ø98						
*EFFLUENT	(2)	EWØ12887	EW#13#49					
EFFLUENTS	(1)	EWØ12939						
*ELASTOMERS	(1)	EWØ13Ø63						
*ELECTROPLATING INDUSTRY	(1)	EWØ12935						
ELECTROPLATING INDUSTRY	(1)	EWØ12999						
EMISSIONS	(1)	EWØ13Ø61						
*EMPLOYMENT	(1)	EWØ12955						
*EMPLOYMENT OPPORTUNITIES	(1)	EWØ12955						
ENDOCR I NOL OGY	(1)	EWØ12958						
*ENERGY	(1)	EWØ131Ø1						
*ENERGY FARMING	(1)	EWØ131Ø1						
*ENERGY PRODUCTION	(1)	EWØ13Ø81						
*ENFORCEMENT	(4)	EWØ12987	EWØ12989	EWØ1299Ø	EWØ12991			
*ENGINEERING	(3)	EWØ12965	EWØ13Ø24	EWØ13Ø98				
*ENVIRONMENT	(12) EWØ13Ø16	EWØ12912 EWØ13Ø24	EWØ12963 EWØ13Ø5Ø	EWØ12973 EWØ13Ø51	EWØ12981 EWØ13Ø85	EWØ12982	EWØ12988	EWØ13Ø15
ENVIRONMENT	(5)	EWØ13Ø13	EWØ13Ø14	EWØ13Ø78	EWØ13Ø84	EWØ13Ø94		
*ENVIRONMENTAL EFFECTS	(5)	EWØ1296Ø	EWØ12966	EWØ12994	EWØ13Ø22	EWØ13Ø86		
*ENVIRONMENTAL IMPACT	(1Ø) EWØ13Ø22	EWØ12887 EWØ13Ø84	EWØ12919 EWØ13Ø94	EWØ12934	EWØ12963	EWØ13ØØ2	EWØ13Ø13	EWØ13Ø14
ENVIRONMENTAL IMPACT	(2)	EWØ13ØØ9	EWØ13Ø65					
*ENVIRONMENTAL IMPACT: *PUBLIC HEALTH	(1)	EWØ12938						
*ENVIRONMENTAL IMPACT STATEMENTS	(1)	EWØ13ØØ2						
ENVIRONMENTAL IMPACT STATEMENTS	(1)	EWØ12981						
*ENVIRONMENTAL LAW	(1)	EWØ12981						





*ENVIRONMENTAL PROBLEMS *ENVIRONMENTAL PROTECTION	(1)	EWØ1292Ø EWØ12982	EWØ13Ø85					
*EQUIPMENT	(7)	EWØ12895	EWØ12959	EWØ13Ø27	EWØ13Ø37	EWØ13Ø45	EWØ13Ø65	EWØ13Ø97
EQUIPMENT	(2)	EWØ13Ø45	EWØ13Ø46					
*EQU'TY FINANCING	(1)	EWØ12924						
*ESTUARIES	(2)	EWØ12887	EWØ12997					
EVALUATION	(1)	EWØ12986						
*EVAPORATION PONDS	(1)	EWØ13Ø26						
EXPLOSIVES INDUSTRY	(1)	EWØ12999						
*EXPOSURE	(2)	EWØ13Ø89	EWØ13Ø9Ø					
*EYE SAFETY	(1)	EWØ13Ø7Ø						
*FACILITIES	(14) EWØ13Ø37	EWØ12925 EWØ13Ø45	EWØ1293Ø EWØ13Ø45	EWØ12944 EWØ13Ø53	EWØ12948 EWØ13Ø58	EWØ13Ø26 EWØ13Ø97	EWØ13Ø35 EWØ131Ø6	EWØ13Ø36
FACILITIES	(2)	EWØ12985	EWØ13Ø46					
*FEDERAL ROLE	(1)	EWØ12981						
FEDERAL ROLE	(2)	EWØ129Ø9	EWØ13Ø59	*				
*FEDERAL STATUTES	(1)	EWØ12988						
*FERTILIZER	(1)	EWØ13Ø81						
FERTILIZER INDUSTRY	(1)	EWØ12999						
*FILMS	(5)	EWØ1ØØ13	EWØ1ØØ14	EWØ1ØØ15	EWØ1ØØ16	EWØ1ØØ17		
FILTRATION	(1)	EWØ12928						
*FINANCING	(2)	EWØ12924	EWØ13Ø58					
*FIRST AID	(1)	EWØ12959						
*FLORIDA	(1)	EWØ13Ø31						
*FLOWMETERS	(1)	EWØ12895						
*FLUID FLOW	(1)	EWØ12895						
*F00D	(2)	E4010013	EWØ131ØØ					
*FUEL	(1)	EWØ13Ø81						
*FUNDING	(1)	EWØ13ØØ1						
*FUNGICIDES	(1)	EWØ12987						
*GAO	(1)	EWØ13Ø85						
*GENERAL ACCOUNTING OFFICE	(1)	EWØ13Ø85						
*GENETIC ENGINEERING	(1)	EWØ12946						
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*GEOCHEMISTRY *GHANA	(1)	EWØ12997 EWØ12978						
*GIARDIA LAMBLIA	(1)	EWØ12968						
*GLOSSARIES	(1)	EWØ12988						
*GOVER NMENT	(1)	EWØ12981						
GOVERNMEN	(1)	EWØ12973						
*GRANTS	(1)	EWØ13ØØ1						
*GREAT LAKES	(1)	EWØ12996						
*GkOUNDWATER	(19) EWØ12992 EWØ13Ø34	EWØ12896 EWØ12993 EWØ13Ø74	EWØ129Ø9 EWØ13ØØ4 EWØ13Ø91	EWØ1291Ø EWØ13ØØ5 EWØ13Ø92	EWØ12911 EWØ13ØØ6	EWØ12927 EWØ13ØØ7	E WØ12928 E WØ13Ø2Ø	EWØ1298Ø EWØ13Ø21
GROUNDWATER	(1)	EWØ12935						
*GUIDELINES	(2)	EWØ13ØØ1	EWØ131Ø4					
GUIDELINES	(1)	EWØ12929						
*GUIDES	(4)	EWØ12923	EWØ1297@	EWØ12979	EWØ12995			
*HANDBOOKS	(6)	EWØ12925	EWØ12929	EWØ12938	EWØ12981	EWØ13Ø33	EWØ13Ø38	
*HANDLING	(1)	EWØ12954						
HANDL ING	(1)	EWØ12961						
*HAZARD ASSESSMENT	(1)	EWØ12941						
*HAZARD COMMUNICATION	(1)	EWØ1297Ø						
*HAZARDOUS MATERIALS	(13) EWØ13Ø4Ø	EWØ12938 EWØ13Ø41	EWØ12941 EWØ13Ø71	EWØ12954 EWØ13Ø87	EWØ1297Ø EWØ13Ø88	EWØ12979 EWØ13Ø99	EWØ13Ø24	EWØ13Ø39
*HAZARDOUS SUBSTANCES	(1)	EWØ13Ø43						
*HAZARDOUS WASTES	(11) EWØ13Ø82	EWØ12933 EWØ13Ø83	EWØ12935 EWØ13Ø87	EWØ12938 EWØ13Ø88	EWØ12942	EWØ1295Ø	EWØ12992	EWØ12998
HAZARDOUS WASTES	(2)	EWØ12981	EWØ12991					
*HAZARDOUS WASTE SITES	(1)	EWØ12933						
*HAZARDS	(1)	EWØ12959						
*HEALTH	(9) EWØ13Ø7Ø	EWØ12921 EWØ13Ø96	EWØ12922	EWØ12923	EWØ1296Ø	EWØ12967	EWØ12973	EWØ13Ø55
HEALIH	(3)	EWØ1291Ø	EWØ13Ø66	FA&131&&				
*HEALTH DEPARTMENTS	(1)	EWØ12912						
*HEALTH EFFECTS	(6)	EWØ12849	EWØ12957	EWØ12958	EWØ12963	EW#12976	EWØ13Ø86	
HEALTH EFFECTS	(1)	EWØ12974						
*HEAVY METALS	(1)	EWØ13Ø94						





*HOUSEHOLD WASTES *HYDRAULIC LOADING	(1)	EWØ12979 EWØ13Ø46						
*HYDRAULIC RAKES	(1)	EWØ13Ø27						
*HYDROCARBONS	(2)	EWØ12896	EWØ13Ø66					
HYDROLOGY	(1)	EWØ13Ø34						
*ILLNESS	(1)	EWØ1291Ø						
*INCINERATION	(2)	EWØ1295Ø	EWØ13Ø48					
*INCINERATORS	(1)	EWØ131Ø5						
*INDEXES	(3)	EWØ13Ø39	EWØ13Ø4Ø	EWØ13Ø41				
*INDUSTRIAL CHEMICALS	(1)	EWØ12958						
*INDUSTRIAL HYGIENE	(1)	EWØ12888						
*INDUSTRIAL MATERIALS	(1)	EWØ12979						
*INDUSTRIAL POLLUTANTS	(1)	EWØ12972						
*INDUSTRIAL POLLUTION	(1)	EWØ12999						
INDUSTRIAL REUSE	(1)	EWØ12974						
*INDUSTRIAL WASTES	(14) EWØ1297 <b>2</b>	EWØ12926 EWØ12998	EWØ12939 EWØ12999	EWØ1294Ø EWØ13Ø29	EWØ12945 EWØ13Ø61	E WØ12947 E WØ13Ø76	EWØ12948 EWØ13Ø79	EWØ12969
*INDUSTRY	(1)	EWØ12923						
INDUSTRY	(3)	EWØ12921	EWØ12973	EWØ13ØØ4				
*INFILTRATION	(2)	EWØ13Ø35	EWØ131Ø6					
*INORGANIC ANALYSIS	(2)	EWØ13Ø17	EWØ13Ø18					
*INORGANIC CHEMICALS	(2)	EWØ13Ø17	EWØ13Ø18					
*INORGANIC CHEMITTRY	(1)	EWØ12997						
*INSECTICIDES	(1)	EWØ12987						
INSPECTION	(3)	EWØ12944	EWØ12989	EWØ12991				
*INSTRUCTION	(1)	EWØ12899						
*INSTRUCTIONAL MATERIALS	(17) EWØ12921 EWØ13Ø4Ø	EWØ1ØØ13 EWØ12922 EWØ13Ø41	EWØ1ØØ14 EWØ12923	EWØ1ØØ15 EWØ12965	EWØ1ØØ16 EWØ12975	EWØ1ØØ17 EWØ13Ø12	EWØ12888 EWØ13Ø34	EWØ12899 EWØ13Ø39
*INSTRUMENTATION	(2)	EWØ12895	EWØ131Ø7					
*INTERACTIVE VIDEO	(1)	EWØ12898						
*INTRUSION CONTRO;	(1)	EWØ13ØØ5						
*INVESTIGATIONS	(1)	EWØ13Ø83						
*ION EXCHANGE RESINS	(1)	[₩Ø13Ø67						
							100	



*IRRIGATION *LABORATORIES	(2) (2)	EWØ13ØØ9 EWØ12956	EWØ13Ø74 EWØ12959					
*LABORATORY PROCEDURES	(11) EWØ13Ø43	EWØ1ØØ14 EWØ13Ø54	EWØ1ØØ16 EWØ13Ø6Ø	EWØ1ØØ17 EWØ131Ø4	EWØ12951	EWØ13Ø17	EWØ13Ø18	EWØ13Ø19
LABORATORY PROCEDURES	(3)	EWØ12968	EWØ12986	EWØ13Ø72				
*LAND DISPOSAL	(1)	EWØ12992						
*LANDFILLS	(2)	EWØ1∠933	EWØ12936					
*LAND TREATMENT	(3)	EWØ12947	EWØ13Ø35	EWØ13Ø44				
*LAND USE	(1)	EWØ12918						
LAND USE	(1)	EWØ12981						
*LAW	(1)	EWØ12981						
*LEACHATE	(1)	EWØ12936						
*L TAKAGE	(1)	EWØ12836						
*LEGIONELLOSIS	(1)	EWØ13Ø11						
*LEGIONNAIRES DISEASE	(1)	EWØ13Ø12						
*LEGISLATION	(4)	EWØ12981	EWØ12982	EWØ13Ø62	EWØ13Ø99			
*LITERATURE REVIEWS	(1)	EWØ13Ø72						
*LOCAL ACTION	(1)	EWØ12973						
*LOCAL ROLE	(1)	EWØ12912						
LOCAL ROLE	(1)	EWØ129Ø9						
*MAINTENANCE	(6)	EWØ12943	EWØ13Ø31	EWØ13Ø32	EWØ13Ø33	EWØ13Ø68	EWØ13Ø97	
MAINTENANCE	(3)	EWØ12944	EWØ13Ø38	EWØ13Ø69				
MAMHOLES	(1)	EWØ13Ø57						
*MANAGEMENT	(27) EWØ12992 EWØ13Ø28 EWØ13Ø87	EWØ12835 EWØ12996 EWØ13Ø31 EWØ13Ø88	EWØ12836 EWØ12998 EWØ13Ø33 EWØ131Ø2	EWØ12911 EWØ13ØØ5 EWØ13Ø5Ø EWØ131Ø3	EWØ12924 EWØ13ØØ8 EWØ13Ø51	EWØ12956 EWØ13ØØ9 EWØ13Ø56	EWØ12965 EWØ13Ø24 EWØ13Ø5?	EWØ12972 EWØ13Ø25 EWØ13Ø69
MANAGEMENT	(3)	EWØ13Ø34	EWØ13Ø36	EWØ13Ø98				
*MANHOLES	(1)	EWØ13Ø32						
*MANUALS	(5)	EWØ12888	EWØ12987	EWØ12989	EWØ1299Ø	EWØ12991		
*MARINE CHEMISTRY	(1)	EWØ12997						
*MARINE ENVIRONMENT	(1)	EWØ12887						
*MARINE ORGANISMS	(1)	EWØ13Ø22						
*MARINE WASTES	(1)	EWØ13Ø79						





MARKETING *MATERIAL RECOVERY	(1)	EWØ13Ø36 EWØ1294Ø						
MATERIAL RECOVERY	(1)	EWØ12939						
*MATERIALS RECOVERY	(1)	EWØ12926						
MATHEMATICS	(1)	EWØ13Ø98						
*MEASUREMENT	(1)	EWØ12895						
*MEASUREMENT PROCEDURES	(1)	EWØ12895						
*MEMBRANE FILTER TECHNIQUE	(1)	EWØ13Ø54						
*METALS	(5)	EWØ1294Ø	EWØ12964	EWØ12997	EWØ13Ø8Ø	EWØ13Ø94		
METALS INDUSTRY	(1)	EWØ12999						
*METERS	(1)	EWØ12836						
*ME THANE	(1)	EWØ13Ø79						
*METHANE PRODUCTION	(1)	EWØ131Ø1						
*MICHIGAN	(1)	EWØ13Ø29						
*MICROBIAL SULFUR RECOVERY	(1)	EWØ12972						
*MICROBIOLOGY	(3)	EWØ12951	EWØ13Ø11	EWØ13Ø12				
MICROBIOLOGY	(1)	EWØ12968						
*MICROORGANISMS	(2)	EWØ12943	EWØ13Ø95					
MICROORGANISMS	(1)	EWØ12897						
*MINNESOTA	(1)	EWØ13Ø48						
MODEL I NG	(1)	EWØ13Ø98						
*MODELS	(2)	EWØ12934	EWØ13Ø49					
MODELS	(3)	EWØ12918	EWØ13Ø13	EWØ13Ø14				
*MONITOR ING	(14) EWØ12993	EWØ12835 EWØ12995	EWØ12911 EWØ13ØØ7	EWØ12933 EWØ13Ø21	EWØ12934 EWØ13Ø29	EWØ12936 EWØ13Ø68	EWØ12966 EWØ13Ø89	EWØ1299Ø
MONITORING	(1Ø) EWØ13Ø38	EWØ129Ø9 EWØ13Ø69	EWØ12949 EWØ13Ø91	EWØ12968	EWØ12974	EWØ12986	EWØ12989	EWØ12991
*MOTIVATION	(1)	EWØ13Ø56						
*MOTOR CONTROLS	(1)	EWØ12839						
*MOTORS	(1)	EWØ12839						
*MULTIPLE TUBE FERMENTATION	(1)	EWØ13Ø54						
*MUNICIPALITIES	(1)	EWØ12925						
*MUNICIPAL LANDFILLS	(1)	EWØ12936						



*MUNICIPAL WASTES *MUTAGENS	(2)	EWØ12947 EWØ13Ø96	EWØ13Ø79		
*NATURAL RESOURCES	(3)	EWØ1ØØ13	EWØ13Ø5Ø	EWØ13Ø51	
NATURAL RESOURCES	(1)	EWØ12927			
*NEEDS	(1)	EWØ12978			
*NEUTRALIZATION	(1)	EWØ1294Ø			
NEUTRALIZATION	(1)	EWØ12897			
*NEW JERSEY	(1)	EWØ13Ø21			
*NITRATES	(1)	EWØ12943			
NITROGEN	(1)	EWØ12897			
NOISE	(1)	EWØ12981			
NOISE POLLUTION CONTROL	(1)	EWØ12982			
*NOMOGRAMS	(1)	EWØ12838			
*NON-SPECIFIC ANALYSIS	(1)	EWØ12986			
*NUCLEAR FUEL	(1)	EWØ131Ø2			
*NUCLEAR MATERIALS	(1)	EWØ12954			
*NUCLEAR REACTORS	(1)	EWØ12954			
*NUCLEAR WASTES	(1)	EWØ131Ø2			
*NUTRIENT CYCLES	(1)	EWØ12997			
*NUTRIENTS	(1)	EWØ13Ø5Ø			
*NUTRITION	(1)	EWØ13Ø16			
*OCCUPATIONAL HEALTH	(3)	EWØ12921	EWØ12922	EWØ12923	
*OCCUPATIONAL INFORMATION	(1)	EWØ12955			
*OCCUPATIONAL SAFETY	(2)	EWØ12922	EWØ13Ø57		
*OCEANOGRAPHY	(1)	EWØ1ØØ13			
*OCEANS	(1)	EWØ12887			
*ODORS	(1)	EWØ13Ø37			
*OHIO RIVER BASIN	(1)	EWØ12927			
*OIL DISPERSANTS	(1)	EWØ13Ø22			
*OIL RECOVERY	(1)	EWØ13Ø63			
*OIL SPILLS	(4)	EWØ13Ø22	EWØ13Ø23	EWØ13Ø63	EWØ13Ø65
OPERATIONS	(1)	EWØ12945			





*OPERATIONS (WASTE DISPOSAL) OPERATIONS (WASTES)	(1)	EWØ131Ø5 EWØ13Ø38						
*OPERATIONS (WASTEWATER)	(19) EWØ13Ø28 EWØ13Ø49	EWØ1293Ø EWØ13Ø29 EWØ13Ø57	EWØ12947 EWØ13Ø31 EWØ13Ø77	EWØ12948 EWØ13Ø33 EWØ131Ø6	EWØ12975 EWØ13Ø35	EWØ12986 EWØ13Ø46	EWØ13ØØ8 EWØ13Ø47	EWØ13Ø25 EWØ13Ø48
*OPERATIONS(WASTEWATER)	(1)	EWØ12835						
OPERATIONS (WASTEWATER)	(1)	EWØ13Ø97						
*OPERATIONS (WATER)	(8) EWØ13Ø97	EWØ12836	EWØ12943	EWØ12968	EWØ12976	EWØ12985	EWØ12986	EWØ13Ø31
OPERATIONS (WATER)	(1)	EWØ12949						
*OPERATIOS (WASTEWATER)	(1)	EWØ12897						
*ORGANIC CHEMICALS	(5)	EWØ12896	EWØ12986	EWØ13Ø43	EWØ13Ø44	EWØ13Ø68		
*ORGANIC CHEMISTRY	(1)	EWØ12997						
*ORGANIC COMPOUNDS	(3)	EWØ13Ø19	EWØ13Ø44	EWØ13Ø66				
*ORGANIC LOADING	(1)	EWØ13Ø46						
*ORGANIC WASTES	(1)	EWØ13Ø81						
*ORGANISMS	(1)	EWØ13Ø22						
ORGANIZATIONS	(1)	EWØ12973						
*OSHA	(1)	EWØ1297Ø						
OSHA	(2)	EWØ12981	EWØ12982					
*OVERLAND FLOW	(1)	EWØ13Ø35						
*OZONATION	(1)	EWØ13Ø93						
*OZONE	(3)	EWØ12985	EWØ13Ø86	EWØ13Ø93				
*PAPER INDUSTRY	(1)	EWØ12945						
PAPER INDUSTRY	(1)	EWØ12999						
*PARASITE EGGS	(1)	EWØ13Ø42						
*PARASITES	(1)	EWØ13Ø42						
*PARAS* JES	(1)	EWØ12951						
*PATHOGENS	(1)	EWØ13Ø72						
*PERFORMANCE EVALUATION	(9) EWØ13Ø79	EWØ12926 EWØ131Ø6	EWØ12949	EWØ13Ø28	EWØ13Ø45	EWØ13Ø45	EWØ13Ø46	EWØ13Ø54
*PERSONNEL	(2)	EWØ13Ø56	EWØ13Ø97					
*PESTICIDES 146	(1)	EWØ13Ø99						
PESTICIDES	(1)	EWØ12981						
							4 4 14	



*PETROLEUM *PH	(1)	EWØ12895 EWØ12838						
PHARMACOL OGY	(1)	EW#12958						
PHOSPHOROUS	(1)	EWØ12897						
*PHYSICAL PROCESSES	(1)	EWØ12969						
*PHYSICAL PROPERTIES	(1)	EWØ12961						
PHYSICAL PROPERTIES	(1)	EWØ13Ø13						
*PHYSIOLOGY	(1)	EWØ1296Ø						
*PILOT STUDIES	(1)	EWØ13Ø49						
*PIPES	(2)	EWØ12837	EW#12838					
PIPES	(1)	EWØ12937						
*PLANNING	(12) EWØ129 <b>95</b>	EWØ12835 EWØ13Ø29	EW#12911 EW#13#5#	EWØ12924 EWØ13Ø51	EWØ12925 EWØ13Ø83	EWØ1293Ø	EWØ12967	EWØ12978
PLANNING	(2)	EWØ12941	EWØ12945					
*PLASTICS	(1)	EWØ13Ø63						
*PLUMBING	(1)	EWØ12838						
*POINT-OF-USE TREATMENT	(1)	EWØ13Ø69						
*POINT-GF-USE-TREATMENT	(1)	EWØ13Ø68						
*POLICIES	(2)	EWØ12934	EWØ12946					
POLICIES	(1)	EWØ12918						
*POLITICS	(1)	EWØ12973						
*POLLUTANTS	(2)	EWØ13Ø26	EWØ13Ø44					
*POLLUTION	(1)	EWØ12973						
*POLLUTION CONTROL	(34) EWØ12946 EWØ13Ø34 EWØ13Ø73 EWØ13Ø92	EWØ129Ø9 EWØ12963 EWØ13Ø5Ø EWØ13Ø75 EWØ13Ø94	EWØ12911 EWØ12973 EWØ13Ø51 EWØ13Ø78 EWØ131Ø5	EWØ12928 EWØ12979 EWØ13Ø59 EWØ13Ø83	EWØ12935 EWØ12988 EWØ13Ø6Ø EWØ13Ø85	EWØ12936 EWØ13ØØ5 EWØ13Ø61 EWØ13Ø89	EWØ12939 EWØ13ØØ6 EWØ13Ø63 EWØ13Ø9Ø	EWØ12942 EWØ13Ø21 EWØ13Ø65 EWØ13Ø91
POLLUTION CONTROL	(8) EWØ13Ø64	EWØ1298Ø	EWØ12981	EWØ12982	EWØ12991	EWØ12992	EWØ12999	EWØ13ØØ7
*POLLUTION DYNAMICS	(1)	EWØ12966						
*POPULATION ANALYSIS	(1)	EWØ13Ø9Ø						
*POROUS BIOMASS SUPPORT SYSTEMS	(2)	EWØ13Ø45	EWØ13Ø45					
*POSTSECONDARY EDUCATION	(14) EWØ12923	EWØ1ØØ14 EWØ12965	EWØ1ØØ15 EWØ12975	EWØ1ØØ16 EWØ13Ø12	EWØ1ØØ17 EWØ13Ø39	EWØ12888 EWØ13Ø4Ø	EWØ12921 EWØ13Ø41	EWØ12922
POSTSECONDARY EDUCATION	(1)	EWØ13Ø34						





*PRECIPITATION *PRETAEATMENT	(1)	EW#1294# EW#13#29						
*PREVENTIVE MEDICINE	(1)	EWØ13Ø71						
PRIVATIZATION	(1)	EWØ13Ø58						
*PROCESS CONTROL	(1)	EWØ12986						
*PROCESS DESIGN MANUALS	(1)	EWØ13Ø35						
*PROCESS MODIFICATION	(1)	EWØ12999						
*PRODUCTIVITY	(1)	EWØ13Ø56						
*PROGRAM DEVELOPMENT	(1)	EWØ12967						
*PROGRAM EVALUATION	(1)	EWØ12967						
*PROJECT DEVELOPMENT	(1)	EWØ12929						
PROJECT EVALUATION	(1)	EWØ12929						
*PROPELLENTS	(1)	EWØ12941						
*PROPOSAL WRITING	(1)	EWØ13ØØ1						
*PUBLIC HEALTH	(21) EWØ13Ø11 EWØ13Ø71	E WØ1 2 9Ø9 E WØ1 3 Ø1 2 E WØ1 3 Ø75	EWØ1291Ø EWØ13Ø15 EWØ13Ø8/	EWØ12911 EWØ13Ø16 EWØ13Ø88	EWØ1296Ø EWØ13Ø42 E' Ø13Ø9Ø	EWØ12963 EWØ13Ø53 EWØ131Ø3	EWØ12968 EWØ13Ø55	EWØ12973 EWØ13Ø64
PUBLIC HEALTH	(5)	EWØ12958	EWØ13ØØ9	EWØ13Ø36	EWØ13Ø69	EWØ13Ø86		
*PUBLIC PARTICIPATION	(4)	EWØ12967	EWØ12973	EWØ13ØØ6	EWØ13Ø99			
*PULP INDUSTRY	(1)	EWØ12945						
*PUMPS	(1)	EWØ12839						
*PURCHASING	(1)	EW#13#3#						
*QUALITY ASS"RANCE	(1)	EWØ131Ø4						
*QUALITY CONTROL	(1)	E WØ1 2 9 5 Ø						
*RADIATION	2)	EWØ12959	EWØ131Ø3					
*RADIOACTIVE MATERIALS	(2)	E₩Ø12954	EWØ131Ø3					
*RADIONUCLIDES	(1)	EWØ12943						
*RCRA	(1)	EWØ12991						
RCRA	(1)	EWØ12981						
RECLAMATION	(1)	EW#13#34						
*RECOMMENDATIONS	(3)	E\#012899	EWØ1292Ø	EWØ12978				
*RECOR DKEEP ING	(1)	E #Ø12836						
*RECYCLING	(7)	EWØ12926	EWØ12974	EWØ12998	E) '3ØØ9	EWØ13Ø47	EWØ13Ø76	EWØ13Ø8Ø



RECYCLING *REFERENCE MANUALS	(3) (2)	EWØ12939 EWØ12961	EWØ12969 EWØ1299Ø	EWØ12992				
*REFERENCE MATERIALS	(6)	EWØ12957	EWØ12958	EWØ13Ø39	EWØ13Ø4Ø	EWØ13Ø41	EWØ131Ø4	
*REGULATIONS	(17) EWØ12982 EWØ13Ø83	EWØ12911 EWØ12987 EWØ13Ø99	EWØ12912 EWØ12988	EWØ12934 EWØ12992	EWØ1295Ø Eww12993	EWØ1297Ø EWØ13Ø52	EWØ12973 EWØ13Ø59	EWØ12981 EWØ13Ø62
REGULATIONS	(1Ø) EWØ13Ø61	EWØ129Ø9 EWØ13Ø78	EWØ12976 EWØ13'ØØ	EWØ12989	EWØ12991	EWØ13ØØ8	EWØ13ØØ9	EWØ13Ø36
*REMEDIAL ACTION	'2)	EWØ12935	EM&13038					
*REMEDIAL INVESTIGATIONS	(1)	EWØ13Ø83						
*REMEDIAL RESPONSES	(1)	EWØ12933						
*REPRODUCTION	(2)	EWØ12958	EWØ12963					
*RESEARCH	(6)	EWØ1ØØ13	EWØ12966	EWØ12995	EWØ13Ø87	EWØ13Ø88	EWØ131Ø7	
RESEARCH	(2)	EWØ12974	EWØ12985					
*RESEARCH NEEDS	(3)	EWØ1292Ø	EWØ12934	EWØ12946				
*RESEARCH REPORTS	(6)	EWØ12934	EWØ13Ø35	EWØ13Ø42	EWØ13Ø44	EWØ13Ø66	EWØ13Ø67	
RESEARCH REPORTS	(1)	EWØ13Ø46						
*RESERVOIRS	(1)	EWØ13ØØ2						
RESINS	(1)	EWØ13Ø67						
*RESISTANCE	(1)	EWØ13Ø95						
*RESOURCE RECOVERY	(7)	EWØ12948	EWØ12969	EWØ12998	EWØ13ØØ9	EWØ13Ø36	EWØ13Ø79	EWØ13Ø8Ø
RESOURCE RECOVERY	(4)	EWØ1294Ø	EWØ12974	EWØ12982	EW#1.2967			
*RESOURCES RECOVERY	(1)	EWØ13Ø76						
RESPONSE GUIDELINES	(1)	EWØ12941						
RISK ANALYSIS	(1)	EWØ13Ø78						
*RISK ASSESSMENT	(8) EWØ13Ø88	£WØ12957	EWØ12992	EwØ13ØØ6	EWØ13Ø14	EWØ13Ø15	EWØ13Ø16	EWØ13Ø87
RISK ASSESSMENT	(1)	EM013100						
*RIVERS	(1)	EWØ12995						
*RODENTICIDES	(1)	EWØ12987						
*ROTATING BIOLOGICAL CONTACTORS	(1)	EWØ13Ø46						
*RURAL AREAS	(2)	EWØ12Ø69	EWØ131Ø6					
*SAFE DRINKING WATER ACT	(1)	EWØ12849						
SAFE DRINKING WATER ACT	(1)	EWØ12982						





*SAFETY	(13)	EWØ12888	EWØ12922	EWØ12923	EWØ12938	EWØ12941	EWØ12954	EWØ12959
<u> </u>	EWØ13Ø32	EWØ13Ø57	EWØ13070	EWØ13Ø87	EWØ13Ø88	EWØ131Ø3	242.2304	
SAFETY	(4)	EWØ12921	EWØ12961	EWØ1297Ø	EWØ12982			
*SAFETY CRITERIA	11)	EWØ12954						
*SAFETY PROGRAMS	(2)	EWØ12944	EWØ13Ø57					
*SALINITY	(1)	EWØ13Ø74						
*SALT WATER INTRUSION	(1)	EWØ13ØØ5						
*SAMPLING	(4)	EWØ1ØØ14	EWØ1295Ø	EWØ12995	EWØ131Ø4			
SAMPLING	(1)	EWØ12368						
*SANITATION	(2)	E¥'312929	EWØ12967					
SEDIMENTATION	(1)	EWØ12928						
*SEPTIC TANKS	(1)	EWØ13ØØ7						
*SERVICES	(1)	EWØ1291_						
*SEWAGE	(2)	EWØ12887	EWØ13Ø75					
SEWAGE	(1)	EWØ13Ø93						
*SEWAGE SLUDGE	(1)	EWØ13Ø47						
*SEWAGE TREATMENT	(1)	EWØ13Ø75						
*SEWERS	(3)	EWØ13Ø32	EWØ13Ø37	EWØ13Ø53				
SEWERS	(1)	EWØ13Ø57						
SILVICULTURE	(1)	EWØ12974						
SIMULATIONS	(2)	EWØ12919	EWØ13Ø98					
SITE ANALYSES	(1)	EWØ12919						
*SITE CLEANUP	(1)	EWØ13Ø83						
*SITE EVALUATION	(1)	E <b>WØ13Ø21</b>						
SITE EVALUATION	(1)	EWØ12942						
SITE SELECTION	(2)	EWØ12947	EWØ13ØØ4					
*SITE VISITS	(2)	EWØ13Ø45	EWØ13Ø45					
*SL UDGE	(9) EWØ13Ø72	EWØ13ØØ' EWØ13Ø77	EWØ13Ø33	EWØ13Ø36	EWØ13Ø42	EWØ13Ø44	EWØ13Ø47	EWØ13Ø48
SLUDGE	(1)	EWØ12897						
SLUDGE CHARACTERISTICS	(1)	EWØ13ØØ8						
*SLUDGE CONDITIONING	(1)	EWØ13Ø48						
*SLUDGE DISPOSAL	(1)	EWØ13ØØ8					_	
							155	!
(3)								



*SLUDGE HANDLING SLUDGE LAGOONING	(1) (1)	EWØ13Ø27 EWØ13Ø42				
SLUDGE STABILIZATION	(1)	EWØ13ØØ8				
*SLUFIDES	(1)	EWØ13Ø37				
*SLURRY TRENCHES	(1)	EWØ12942				
*SL'IRRY WALLS	(1)	EWØ12942				
*SOFTWARE DEALERS	(1)	EWØ13Ø2Ø				
*SOFTWARE DEVELOPERS	(1)	EWØ13Ø2Ø				
*SOFTWARE LISTINGS	(1)	EWØ13Ø2Ø				
SOIL	(1)	EWØ12935				
*SOILS	(3)	EWØ13Ø13	EWØ13Ø14	EWØ13Ø74		
SOILS	(1)	EWØ12947			•	
*SOLID WASTES	(1)	EWØ13 Ø5				
SOLID WASTES	(2)	EWØ12945	EWØ12981			
*SOL VENTS	(1)	EWØ12961				
SPILL CONTROL	(1)	EWØ12944				
*SPRAY EVAPORATION PONDS	(1)	EWØ13Ø26				
*STANDAR DS	(5)	EWØ1ØØ15	EWØ12954	EWØ12965	EWØ1297Ø	EWØ13Ø62
*STATE ROLE	(1)	EWØ12924				
STATE ROLE	(1)	EWØ129Ø9				
STATISTICS	(1)	EWØ13Ø98				
*STATUTES	(1)	EWØ12982				
*STORAGE	(1)	EWØ12954				
*STORAGE TANKS	(1)	EWØ12944				
SUPERFUND	(1)	EWØ12981				
*SURFACE IMPOUNDMENTS	(1)	EWØ12933				
SURFACE WATER	(2)	EWØ1291Ø	EWØ12935			
*SUR VEYS	(5)	EWØ12955	EWØ13ØØ5	EWØ13Ø45	EWØ13Ø45	EWØ13Ø96
*SYMPOSIA	(1)	EWØ12964				
*SYSTEMS ANALYSIS	(1)	EWØ13Ø14				
TANKS	(1)	EWØ12937				
*TASK ANALYSIS	(1)	EWØ13Ø97				



*TECHNOLOGY	(17) EWØ12972 EWØ13Ø8Ø	EWØ12926 EWØ13Ø <b>Ø</b> 6 EWØ131Ø7	EWØ1293Ø EWØ13Ø35	EWØ12935 EWØ13Ø39	EWØ12936 EWØ13Ø4Ø	EWØ12939 EWØ13Ø41	EWØ1294Ø EWØ13Ø45	EWØ12946 EWØ13Ø47
TECHNOLOGY	(6)	EWØ12949	EWØ12969	EWØ12985	EWØ13ØØ8	EWØ13Ø38	EWJ13Ø63	
*TELEVISION	(2)	EWØ12898	EWØ12899					
*TERMINOLOGY	(1)	EWØ12988						
*TESTING PROTOCOL	(1)	EWØ13Ø43						
*TEXTILE INDUSTRY	(1)	EWØ12926						
*TIME	(1)	EWØ13Ø25						
*TOXICITY	(2)	EWØ12849	EWØ12972					
*TOXICOLOGY	(12) EWØ13Ø15	EWØ12912 EWØ13Ø16	EWØ1292Ø EWØ13Ø22	EWØ12923 EWØ13Ø6Ø	EWØ12938 EWØ13Ø86	EWØ12964	EWØ12966	EWØ12994
TOXICOLOGY	(2)	EWØ12921	EWØ12958					
*TOXIC SUBSTANCES	(20) EW012992 EW013044	EWØ12888 EWØ13Ø15 EWØ13Ø5Ø	EWØ12938 EWØ13Ø16 EWØ13Ø66	EWØ12942 EWØ13Ø24 EWØ13Ø99	EWØ12944 EWØ13Ø39 EWØ131ØØ	EWØ12957 EWØ13Ø4Ø	EWØ1296Ø EWØ13Ø41	EWØ1299Ø EWØ13Ø43
TOXIC SUBSTANCES	(4)	EWØ12928	EWØ12981	EWØ12982	EWØ13Ø61			
*TRACE METALS	(1)	EWØ12997						
*TRAINING	(2)	EWØ12899	EWØ1297Ø					
TRAINING	(2)	EWØ12941	EWØ12944					
*TRAINING MANUALS	(1)	EWØ12888						
*TRANSPORT	(1)	EWØ12963						
*TRANSPORTATION	(1)	EWØ12954						
TRANSPORTATION	(1)	EWØ12941						
*TRANSPORT PROCESSES	(1)	EWØ12997						
*TREATMENT	(1)	EWØ13Ø12						
*TREATMENT SYSTEMS	(1)	EWØ1298Ø						
*TREATMENT TECHNOLOGIES	(1)	EWØ12935						
*TRENDS	(2)	EWØ1291Ø	EWØ13Ø52					
*TRIHALOMERHANES	(1)	EWØ1ØØ16						
*TRIHALOMETHANES	(4)	EWØ1ØØ14	EWØ1ØØ15	EWØ1ØØ17	EWØ12949			
*TSCA	(1)	EWØ1299Ø						
*TURBIDITY	(1)	EWØ12943						
*ULTRAVIOLET RADIATION	(1)	EWØ13Ø49						
*UNIT PROCESSES	(2)	EWØ12933	EWØ12998				150	



⇒URBAN AREAS ⇒USEPA	(1)	EWØ12918 EWØ12925	EWØ12987					
USEPA	(1)	EWØ12989						
*USER SURVEYS	(1)	EWØ13Ø29						
*VIDEO INSTRUCTION	(1)	EW#12898						
*WASHINGTON	(1)	EWØ13Ø82						
*WASTE COLLECTION	(1)	EWØ13Ø75						
*WASTE DISPOSAL	(26) EWØ12967 EWØ13Ø44 EWØ13Ø82	EWØ12887 EWØ12979 EWØ13Ø47 EWØ131Ø2	EWØ12933 EWØ13Ø36 EWØ15Ø48 EWØ131Ø3	EWØ12935 EWØ13Ø38 EWØ13Ø75	EWØ12936 EWØ13Ø39 EWØ13Ø76	EWØ12942 EWØ13Ø4Ø EWØ13Ø78	EWØ12948 EWØ13341 EWØ13Ø79	EWØ1295Ø EWØ13Ø42 EWØ13Ø8Ø
WASTE DISPOSAL	(3)	EWØ12969	EWØ13Ø59	EWØ13Ø61				
*WASTE MANAGEMENT	(2)	EWØ12998	EWØ12999					
WASTE MANAGEMENT	(1)	EWØ12972						
*WASTE REDUCTION	(1)	EWØ12956						
*WASTE REUSE	(1)	EWØ12998						
*WASTES	(1)	EWØ13Ø76						
*WASTE SITES	(1)	EWØ13Ø38						
*WASTE STORAGE	(2)	EWØ131Ø2	EWØ131Ø3					
*WASTE TREATMENT	(6)	EWØ12946	EWØ12969	EWØ12992	EWØ13Ø94	EWØ131Ø2	EWØ131Ø3	
*WASTEWATER	(7)	EWØ13ØØ9	EWØ13Ø17	EWØ13Ø18	EWØ13Ø19	EWØ13Ø39	FWØ13Ø4Ø	EWØ13Ø41
*WASTEWATER COLLECTION	(3)	EWØ13Ø32	EWØ13Ø37	EWØ13Ø53				
*WASTEWATER TREATMENT	(51) EWØ12947 EWØ13ØØ9 EWØ13Ø33 EWØ13Ø43 EWØ13Ø57 EWØ13Ø97	EWØ12835 EWØ12948 EWØ13Ø24 EWØ13Ø35 EWØ13Ø44 EWØ13Ø58 EWØ131Ø1	EWØ12897 EWØ12965 EWØ13Ø25 EWØ13Ø36 EWØ13Ø45 EWØ13Ø67 EWØ131Ø6	EWØ12925 EWØ12975 EWØ13Ø27 EWØ13Ø37 EWØ13Ø45 EWØ13Ø72 EWØ131Ø7	EWØ12926 EWØ12986 EWØ13Ø28 EWØ13Ø39 EWØ13Ø46 EWØ13Ø73	EWØ1293Ø EWØ12994 EWØ13Ø29 EWØ13Ø4Ø EWØ13Ø47 EWØ13Ø75	EWØ12939 EWØ13ØØ7 EWØ13Ø3Ø EWØ13Ø41 EWØ13Ø48 EWØ13Ø77	EW012940 EW013008 EW013031 EW013042 EW013049 EW013093
WASTEWATER TREATMENT	(1)	EWØ12928						
*WATER	(6)	EWØ13Ø17	EWØ13Ø18	EWØ13Ø19	EWØ13Ø39	EWØ13Ø4Ø	EWØ13Ø41	
*WATER AUDITS	(1)	EWØ12836						
*WATER DISTRIBUTION	(4)	EWØ12836	EWØ12837	EWØ12838	EWØ12937			
*WATER HYACINTHS	(1)	EWØ131Ø1						
*WATER PIPES	(3)	EWØ12837	EWØ12838	EWØ13Ø53				
*WATER POLLUTION	(4)	EWØ13Ø13	EWØ13Ø14	EWØ10Ø87	EWØ13Ø88			
WATER POLLUTION	(2)	EWØ12919	EWØ12981					





*WATER	POLLUTION CONTROL	(9) EWØ13Ø63	EWØ128 <b>9</b> 6 EWØ13Ø92	EWØ12945	EWØ1298Ø	EWØ13ØØ7	EWØ13Ø49	EWØ13Ø5Ø	EWØ13Ø51
WATER	POLLUTION CONTROL	(2)	EWØ12982	EWØ13Ø6Ø					
*WATER	PRESSURE	(1)	EWØ12839						
*WATER	QUALITY	(24) EWØ12985 EWØ13Ø41 EWØ131Ø4	EWØ12849 EWØ12986 EWØ13Ø52	EWØ12887 EWØ12995 EWØ13Ø62	EWØ12896 EWØ13ØØ5 EWØ13Ø74	EWØ12927 EWØ13ØØ7 EWØ13Ø87	EWØ12928 EWØ13ØØ9 EWØ13Ø88	EWØ12965 EWØ13Ø39 EWØ13Ø92	EWØ1298Ø EWØ13Ø4Ø EWØ131Ø1
WATER	QUALITY	(4)	EWØ12918	EWØ12968	EWØ13Ø84	EWØ13Ø91			
*WATER	QUALITY ACTS	(1)	EWØ13Ø62						
*WATER	RESOURCES	(15) EWØ1298Ø	EWØ1ØØ13 EWØ13ØØ2	EWØ12918 EWØ13ØØ5	EWØ12924 EWØ13ØØ6	EWØ12927 EWØ13Ø39	EWØ12955 EWØ13Ø4Ø	EWØ12974 EWØ13Ø41	EWØ12978 EWØ13Ø91
*WATER	REUSE	(3)	EWØ12926	EWØ12974	EWØ13ØØ9				
*WATER	STABILITY	(1)	EWØ12838						
*WATER	SUPPLY	(18) EWØ12928 EWØ13ØØ5	EWØ12836 EWØ12929 EWØ13Ø34	EWØ12837 EWØ12955 EWØ13Ø53	EWØ12838 EWØ12967	EWØ129Ø9 EWØ12978	EWØ1291Ø EWØ12993	EWØ12911 EWØ12995	EWØ12927 EWØ13ØØ4
WATER	SUPPLY	(2)	EWØ12918	EWØ1298Ø					
*WATER	TREATMENT	(33) EWØ12937 EWØ12986 EWØ13Ø41 EWØ13Ø97	EWØ1ØØ14 EWØ12943 EWØ12993 EWØ13Ø52 EWØ131Ø7	EWØ1ØØ15 EWØ12949 EWØ12994 EWØ13Ø54	EWØ1ØØ16 EWØ12965 EWØ13ØØ6 EWØ13Ø55	EWØ1ØØ17 EWØ12968 EWØ13Ø3Ø EWØ13Ø68	EWØ12837 EWØ12974 EWØ13Ø31 EWØ13Ø69	EWØ129Ø9 EWØ12976 EWØ13Ø39 EWØ13Ø93	EW012910 EW012985 EW013040 EW013095
WATER	TREATMENT	(2)	EWØ13Ø34	EWØ13Ø67					
*WATER	USE	(1)	EWØ12996						
WELLS		(1)	EWØ13Ø78						
WELL V	<b>√</b> ATER	(1)	EWØ1291Ø						
*WETLA	NDS	(1)	EWØ12996						
*WORKS	HOPS	(1)	EWØ1292Ø						
*WORLD	PROBLEMS	(1)	EWØ13Ø75						
WORLD	PROBLEMS	(1)	EWØ12973						
*WORLD	RESOURCES	(1)	EWØ13Ø75						

